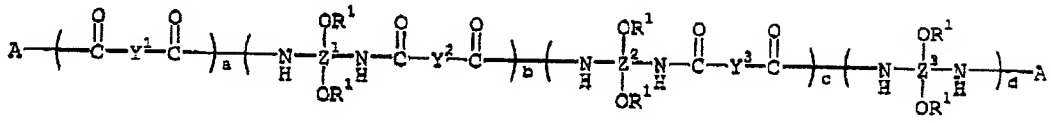
We Claim:

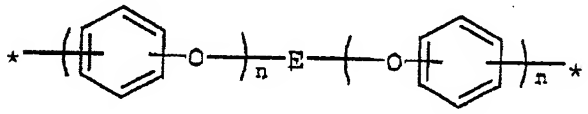
1. A poly-o-hydroxyamide having a formula I



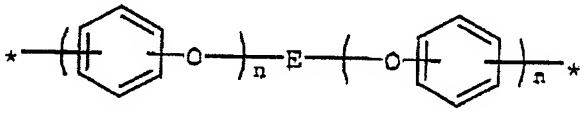
FORMULA I

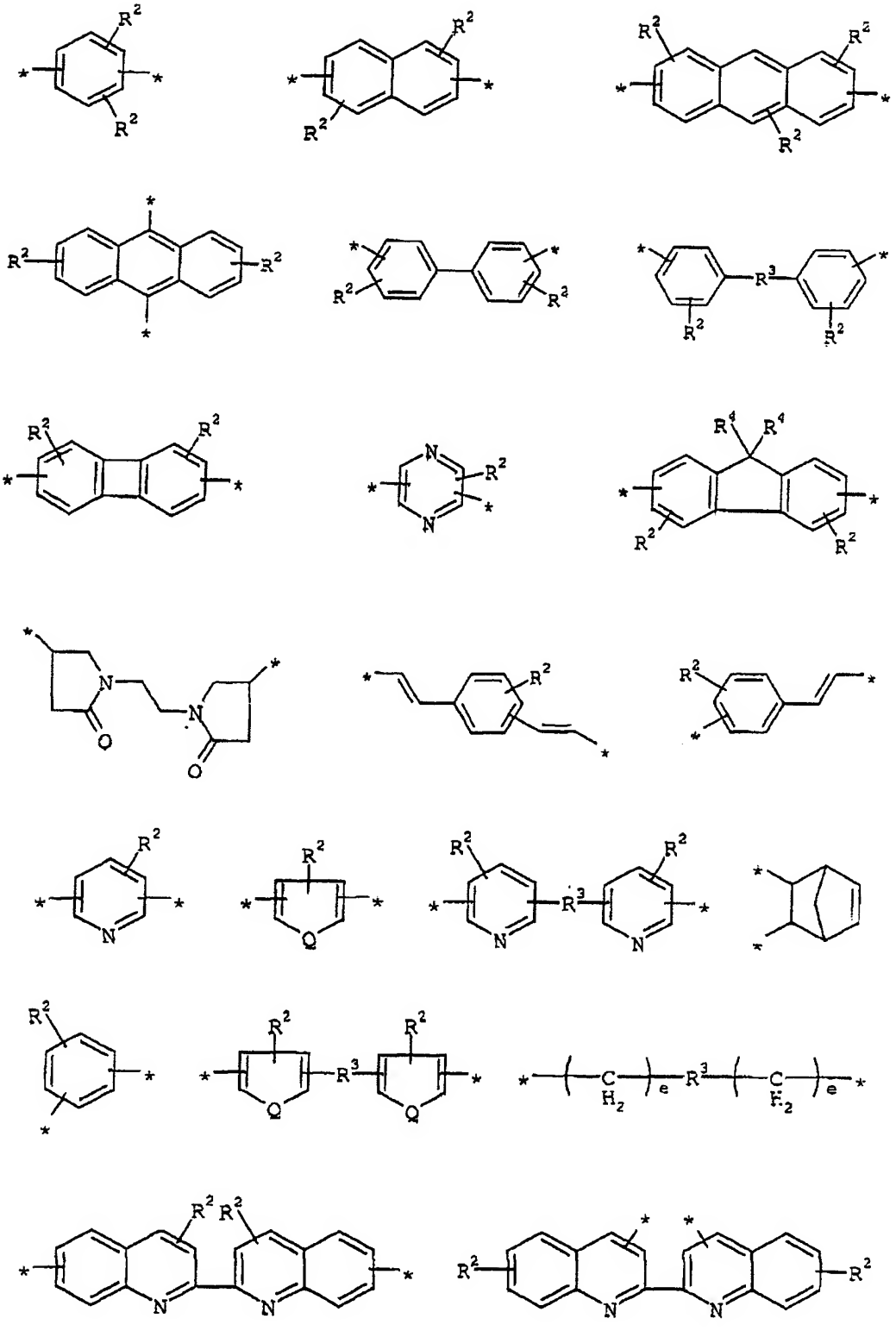
wherein:

Y^2 is

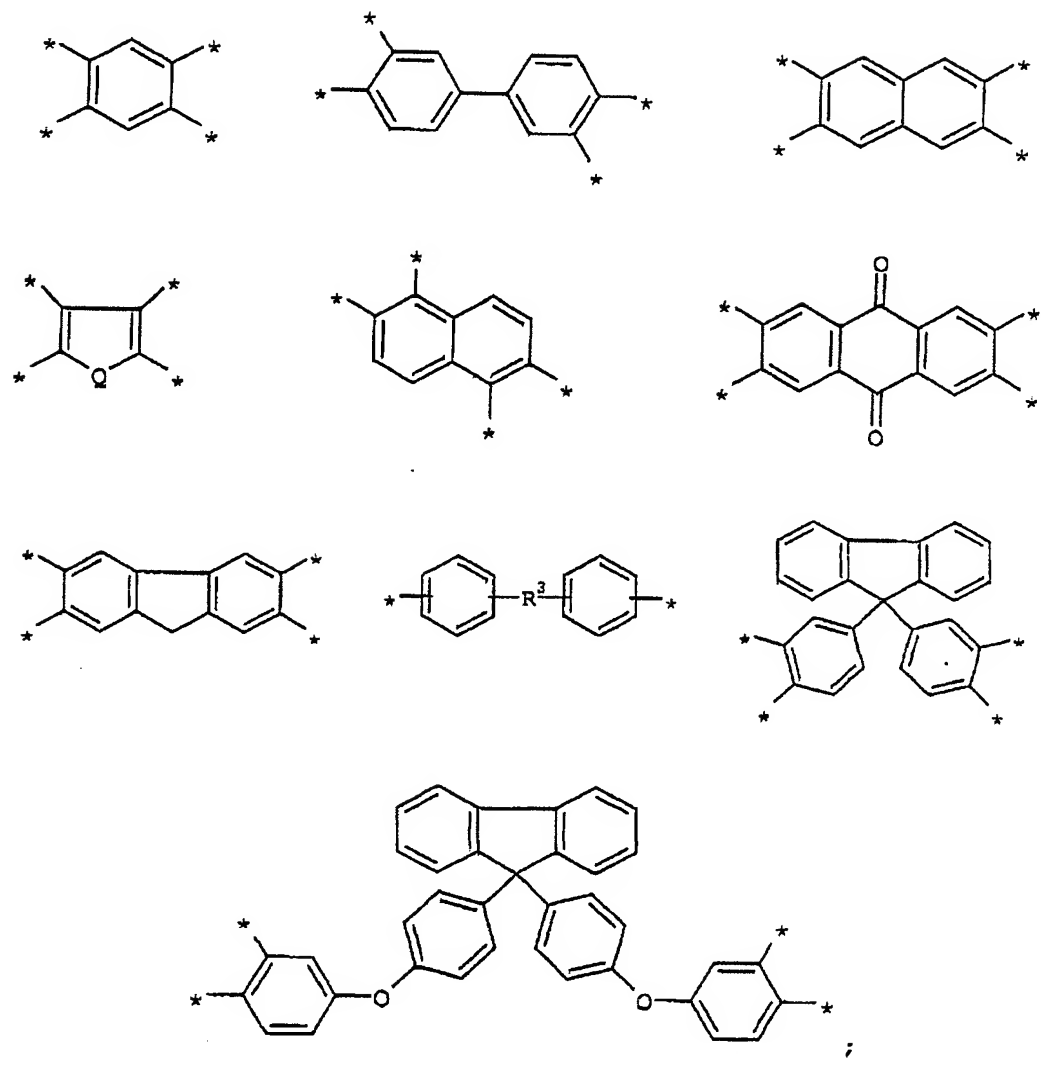


Y^1 and Y^3, in each case independently of one another, are a substituent selected from the group consisting of:



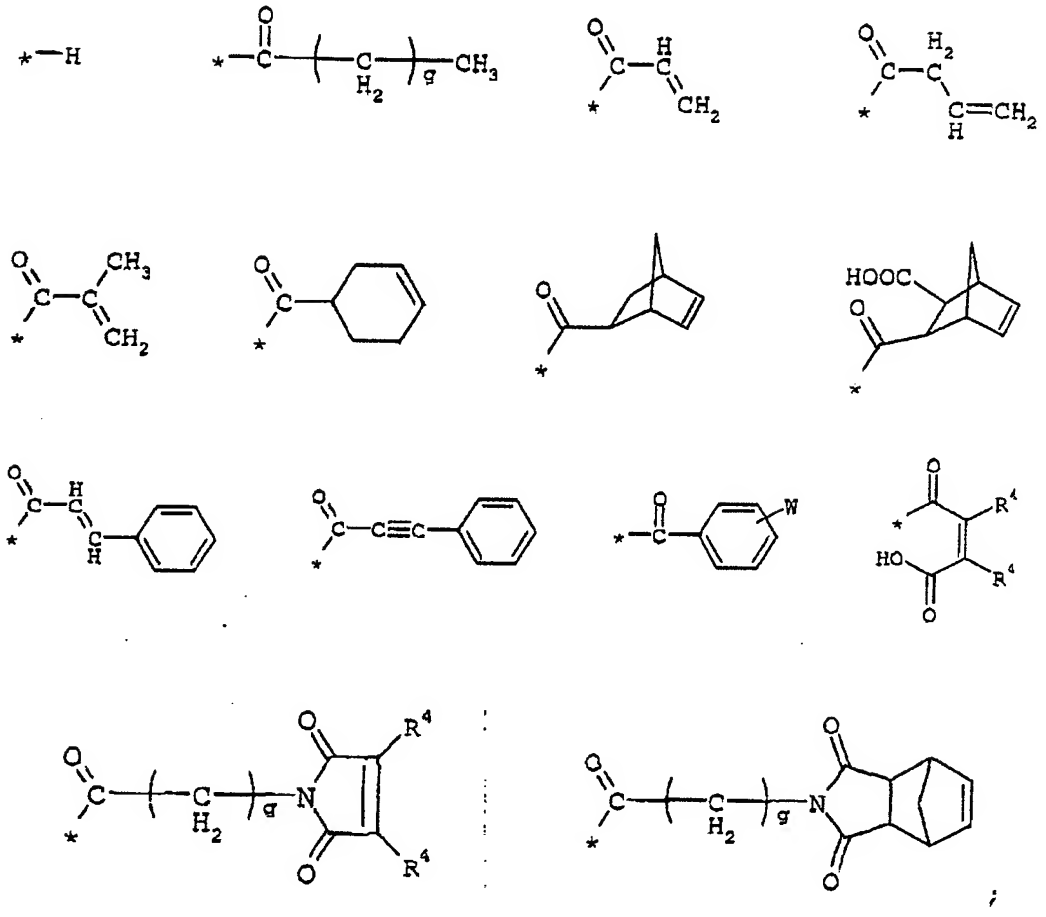


Z^1, Z^2, and Z^3, in each case independently, are substituents selected from the group consisting of:

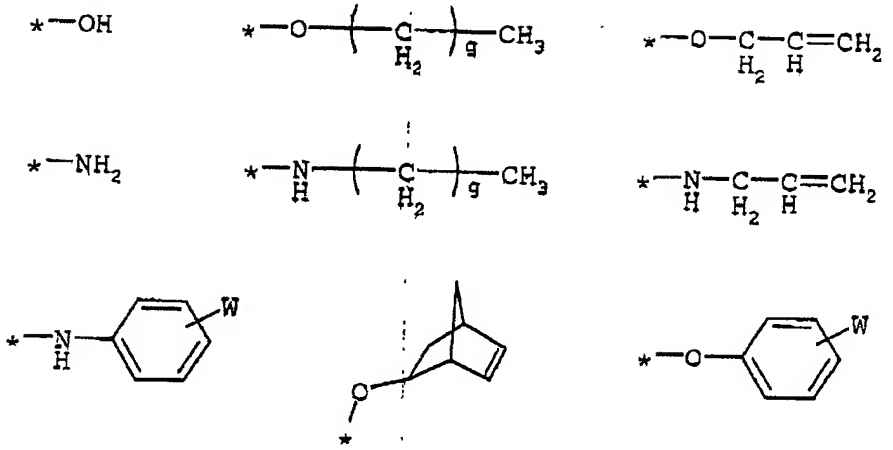


;

A, if at least one of a = 0 and d = 1, is a substituent selected from the group consisting of:

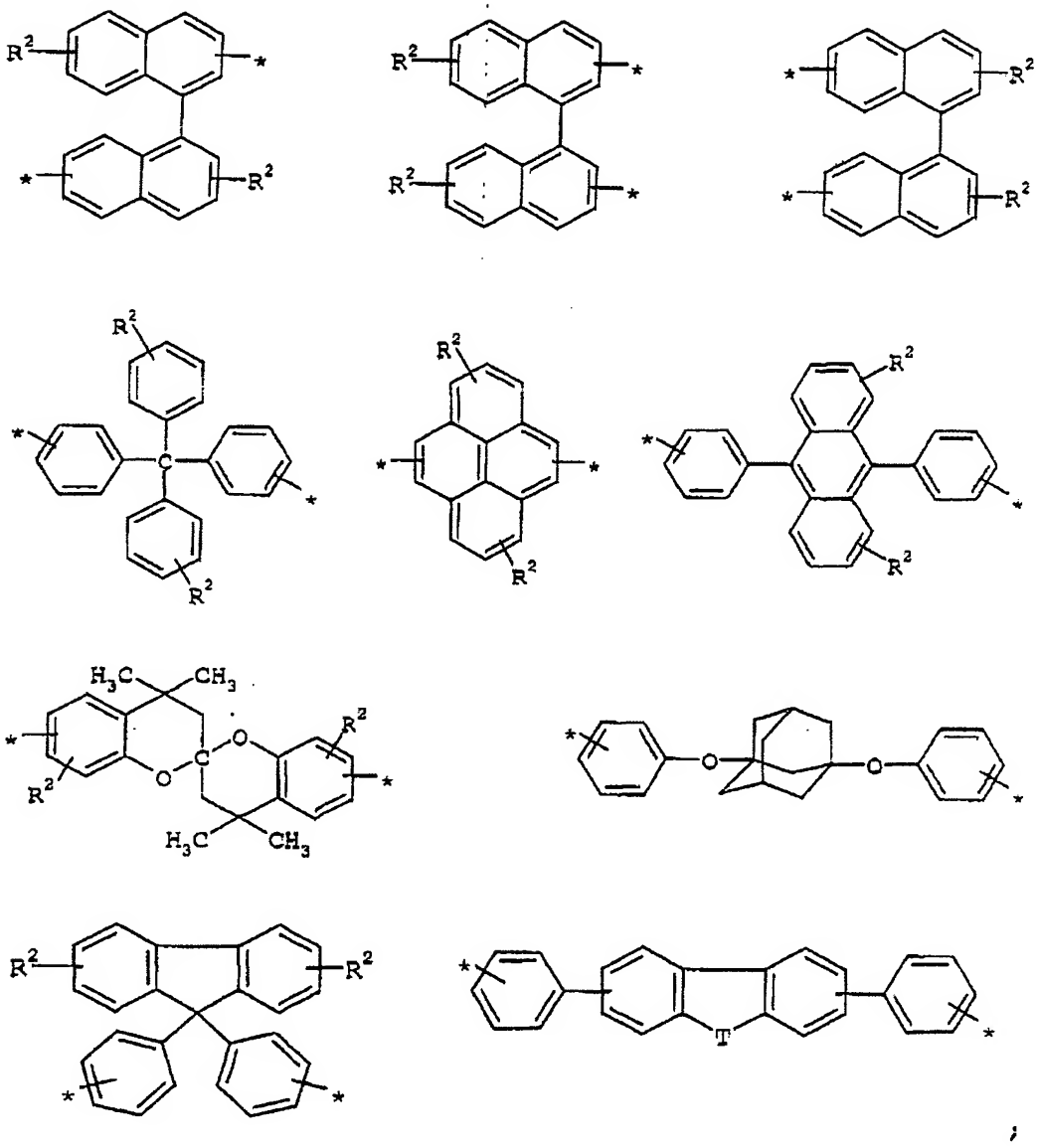


A, if at least one of a = 1 and d = 0, is a substituent selected from the group consisting of:



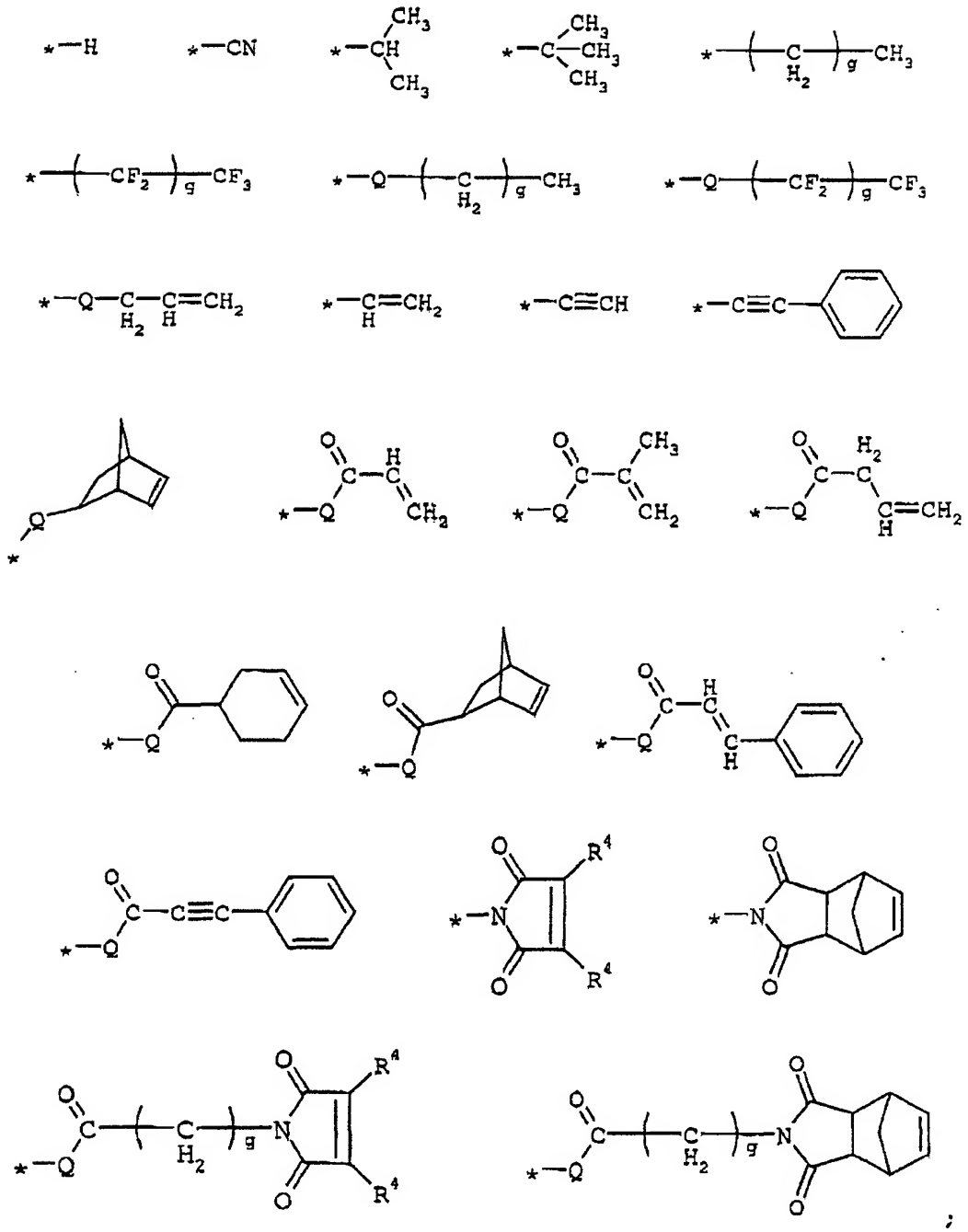
;

E is a substituent selected from the group consisting of:

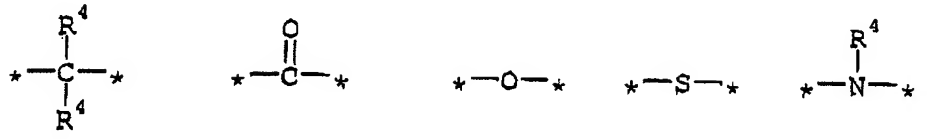


;

W is a substituent selected from the group consisting of:

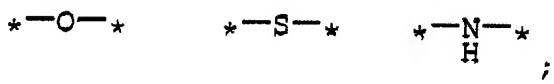


T is a substituent selected from the group consisting of:



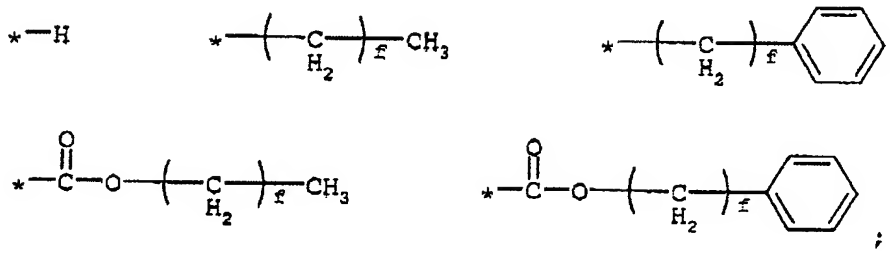
;

Q is



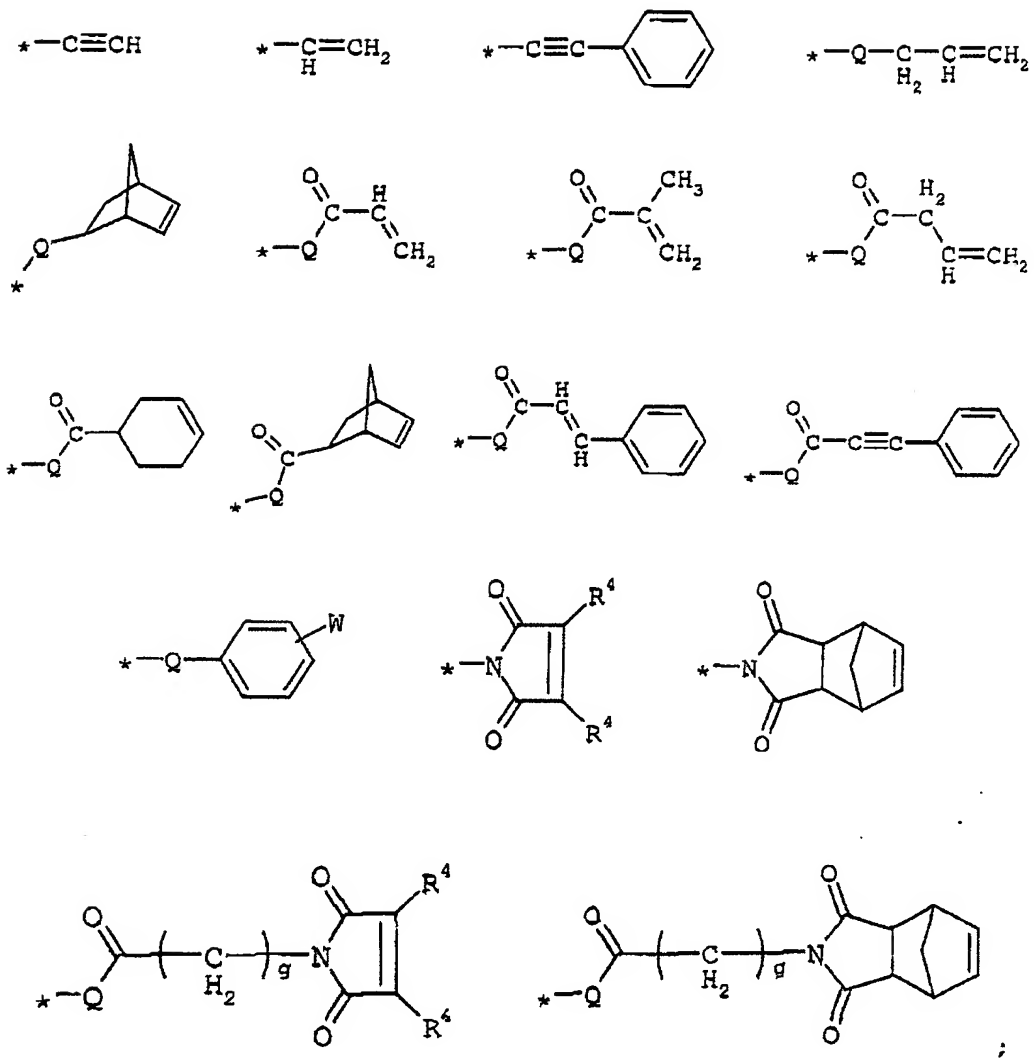
;

R^1 is a substituent selected from the group consisting of:

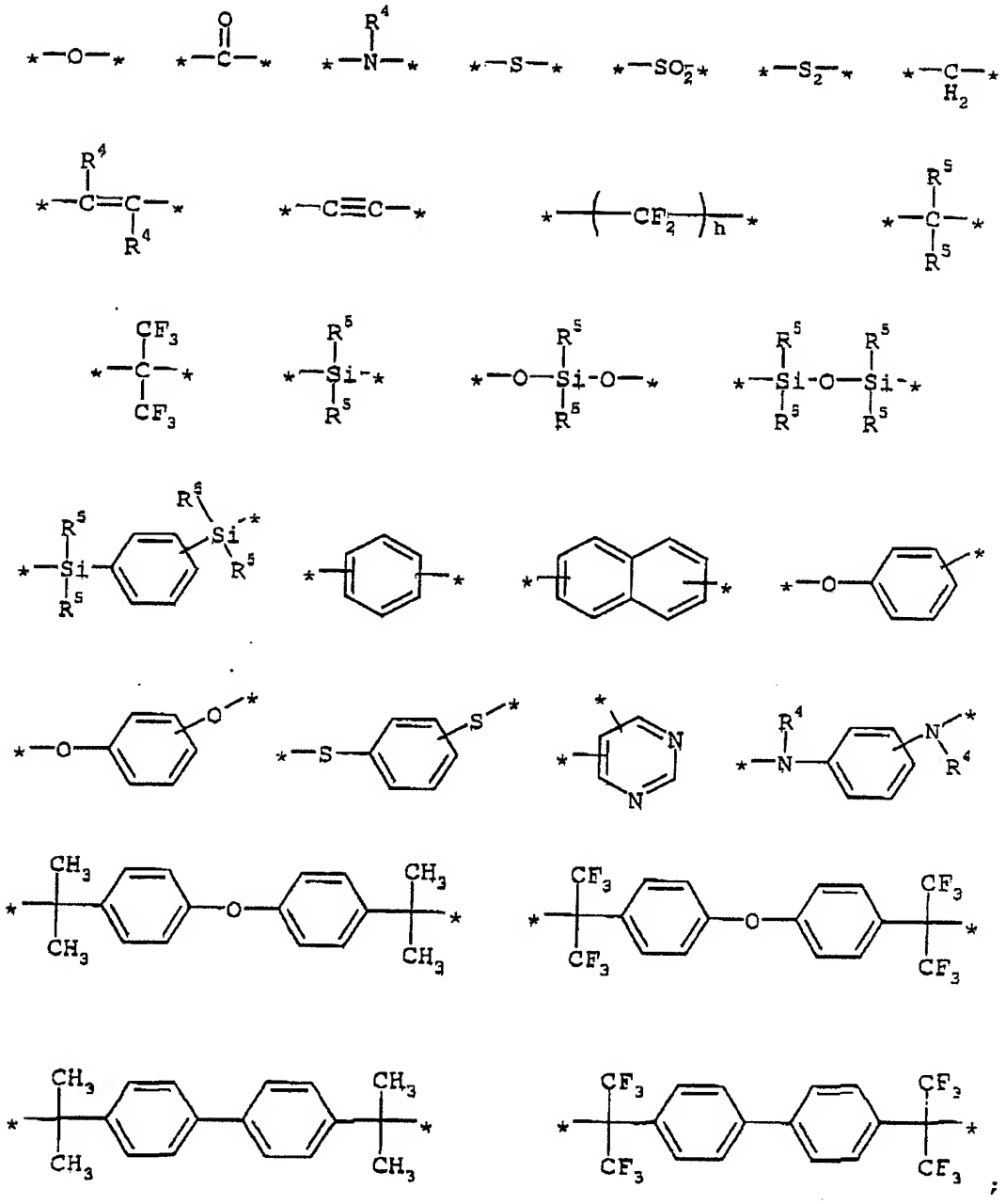


;

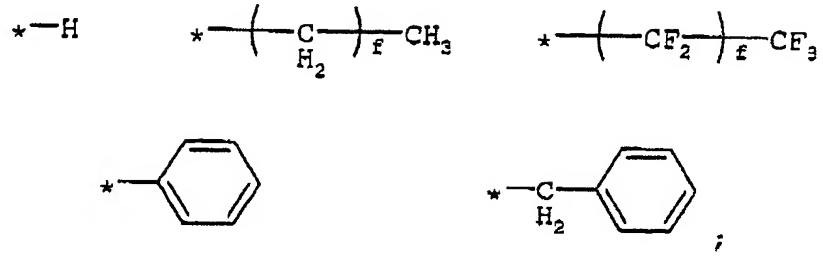
R^2 is a substituent selected from the group consisting of -H, -CF_3, -OH, -SH, -COOH, -$N(R^5)_2$, an alkyl group, an aryl group, a heteroaryl group and



R^3 is a substituent selected from the group consisting of:



R^4 is a substituent selected from the group consisting of:



;

R^5 is a substituent selected from the group consisting of an alkyl, an aryl, and a heteroaryl radical;

a is an integer from 0 to 1;

b is an integer from 1 to 200;

c is an integer from 0 10 200;

d is an integer from 0 to 1;

e is an integer from 0 to 10;

f is an integer from 0 to 10;

g is an integer from 0 to 10;

h is an integer from 1 to 10;

n is an integer from 0 to 1; and

x is an integer from 0 to 10 if R^3 is $-CH_2-$.

2. The poly-o-hydroxyamide according to claim 1, wherein b is an integer from 5 to 50.

3. The poly-o-hydroxyamide according to claim 1, wherein c is an integer from 0 to 50.

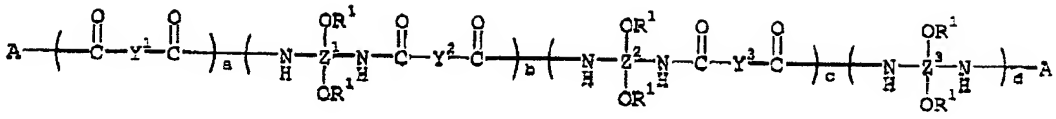
4. The poly-o-hydroxyamide according to claim 1, wherein n equals 1.

5. The poly-o-hydroxyamide according to claim 1, wherein said hydroxyamide of said formula I includes repeating units, said repeating units being thermally labile and liberating a gas on heating.

6. The poly-o-hydroxyamide according to claim 5, wherein said thermally labile repeating units are formed as a block in said poly-o-hydroxyamide of said formula I.

7. A polybenzoxazole obtained from the poly-o-hydroxyamide according to claim 1.

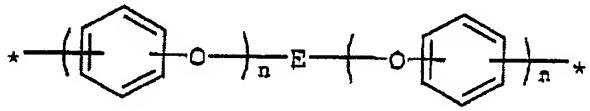
8. A process for preparing a poly-o-hydroxyamide having a formula I



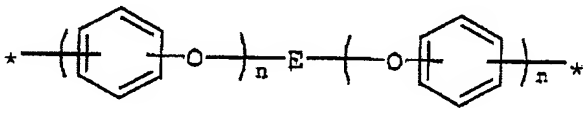
FORMULA I

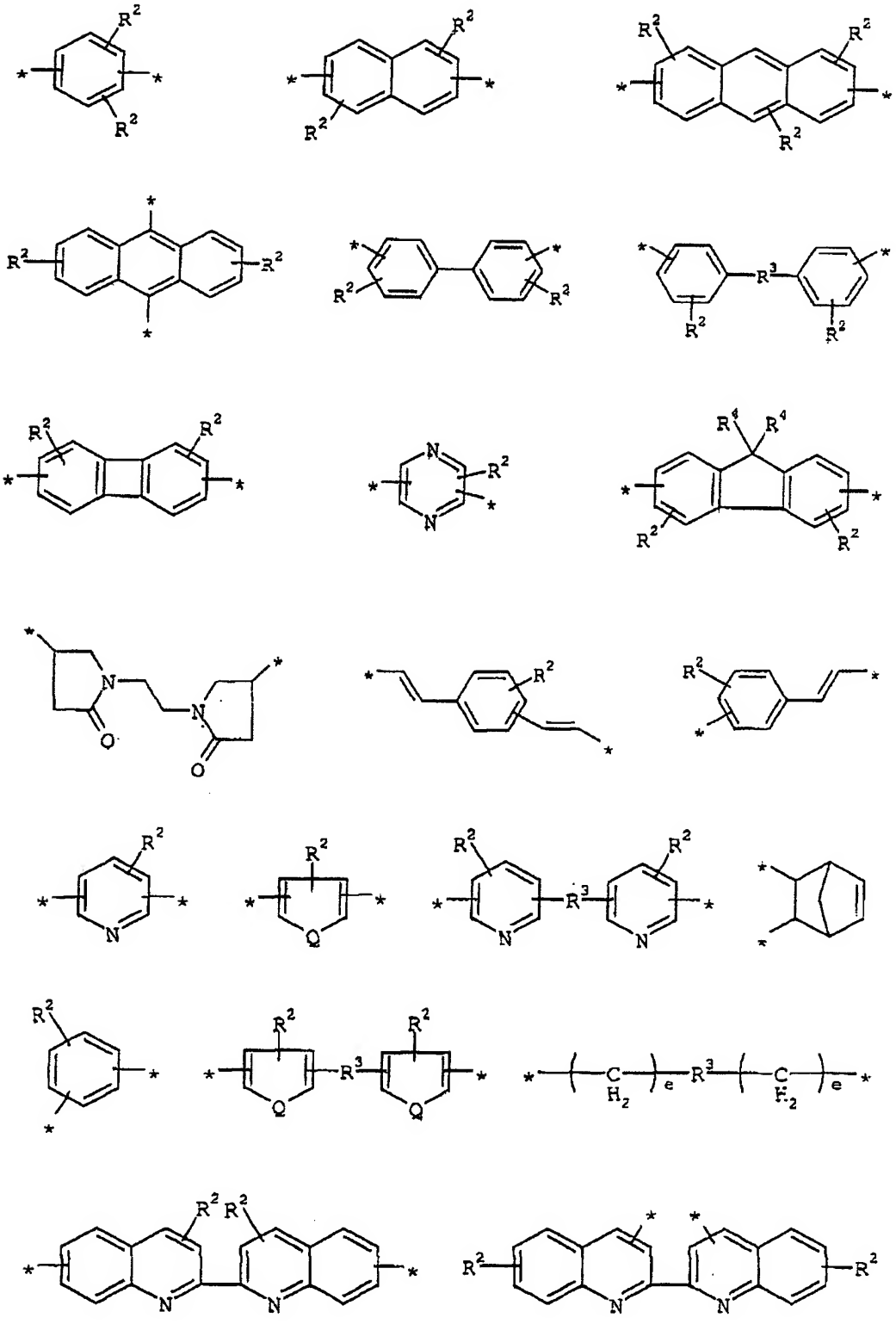
wherein:

Y^2 is

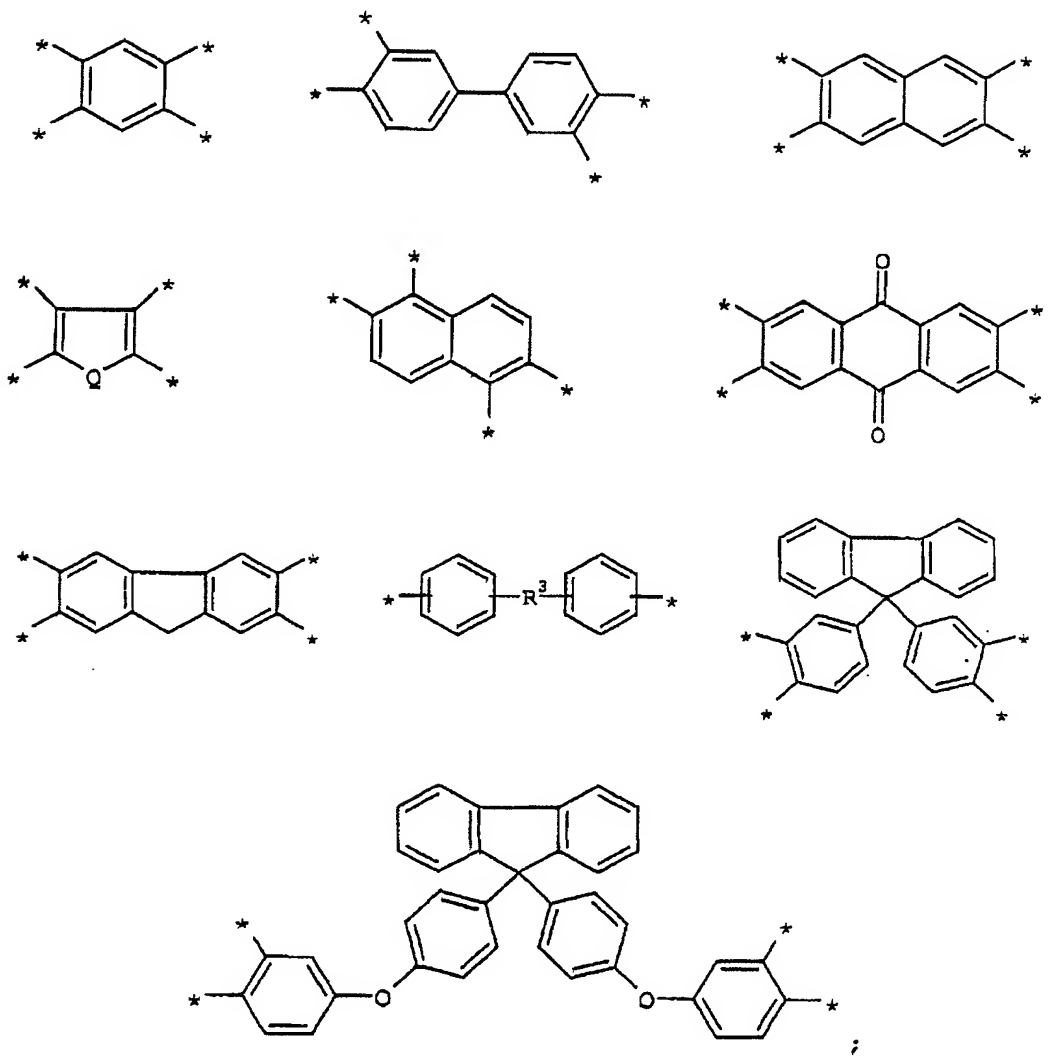


Y^1 and Y^3, in each case independently of one another, are a substituent selected from the group consisting of:



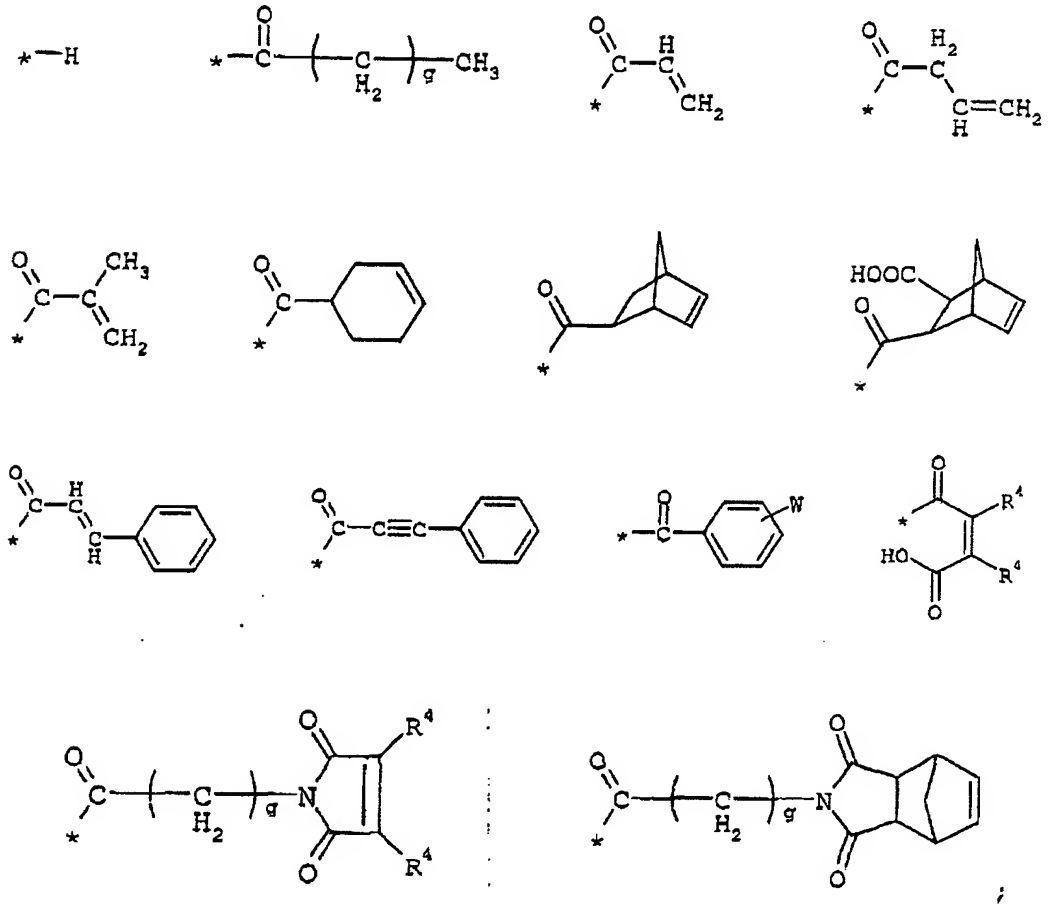


Z^1, Z^2, and Z^3, in each case independently, are substituents selected from the group consisting of:

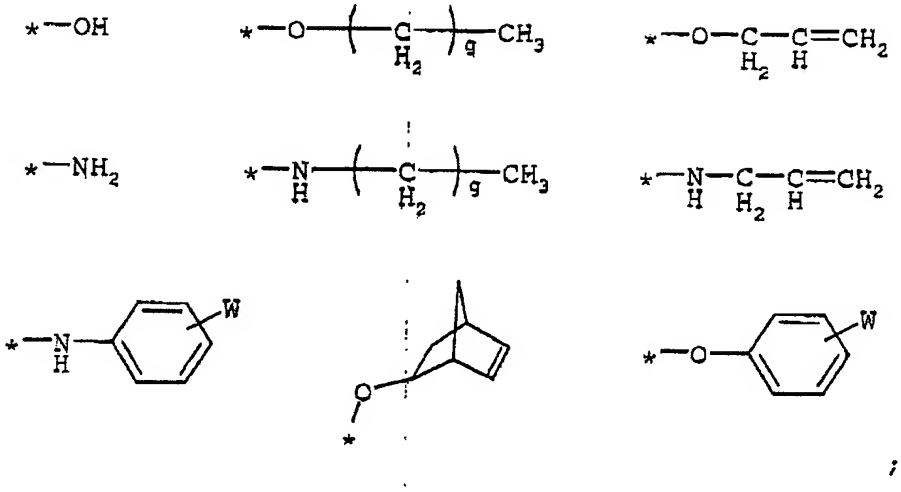


;

A, if at least one of a = 0 and d = 1, is a substituent selected from the group consisting of:

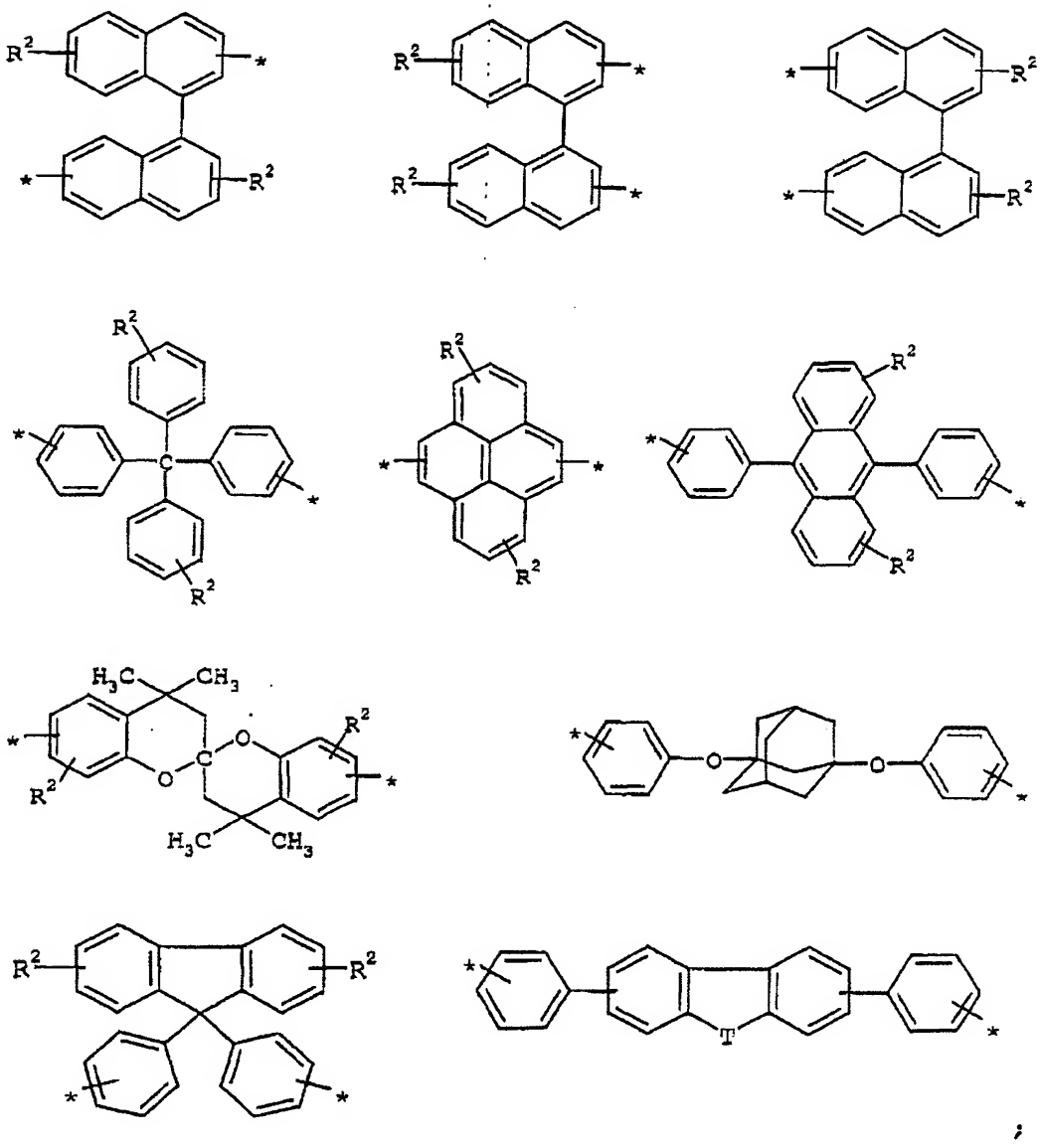


A, if at least one of a = 1 and d = 0, is a substituent selected from the group consisting of:



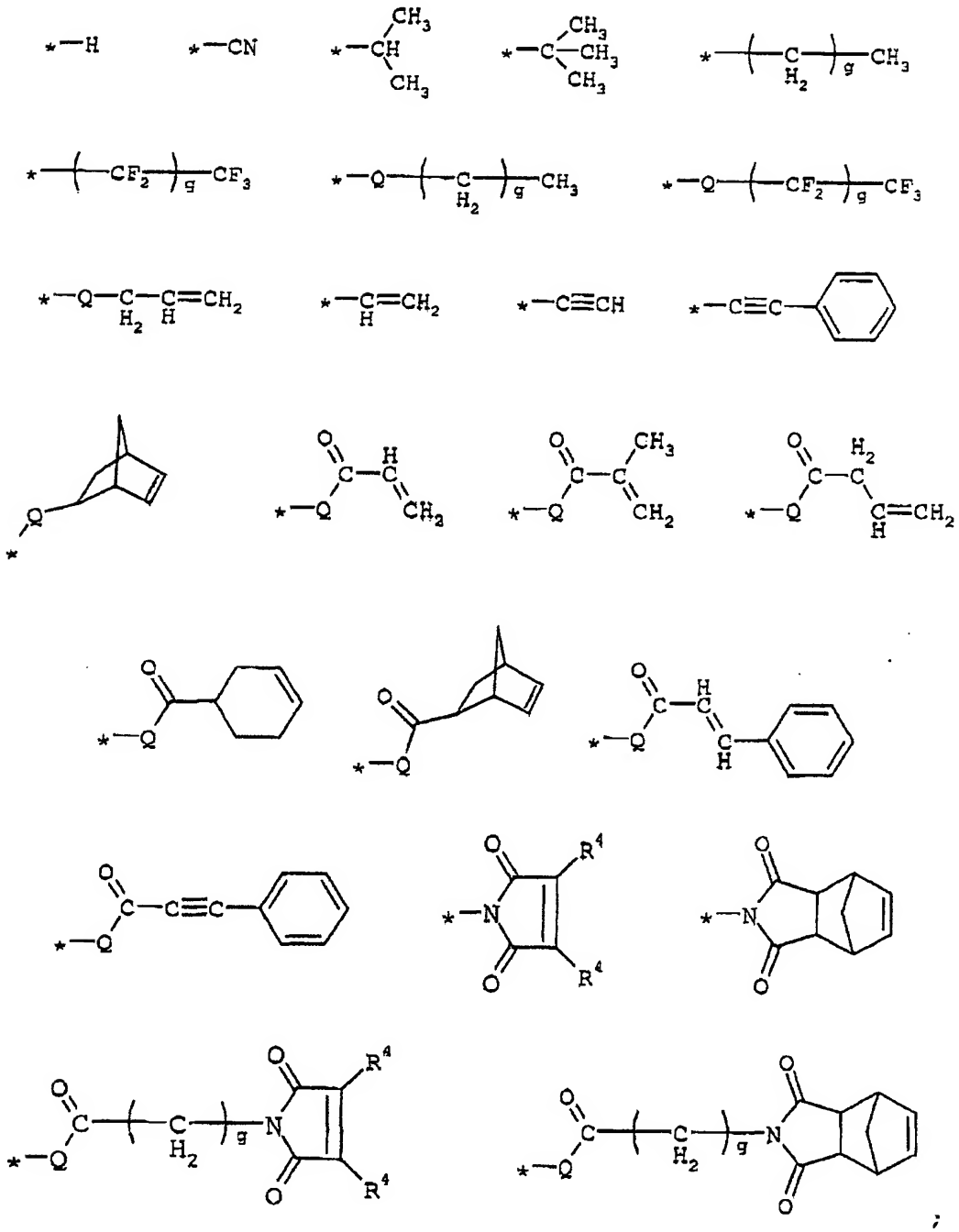
;

E is a substituent selected from the group consisting of:

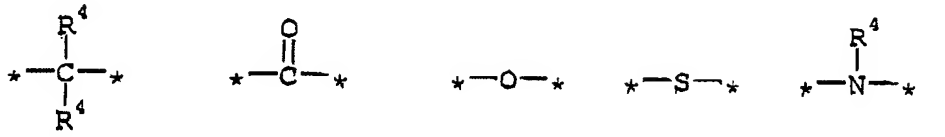


;

W is a substituent selected from the group consisting of:

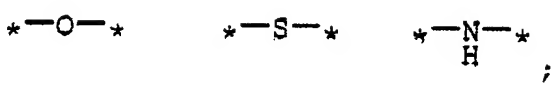


T is a substituent selected from the group consisting of:



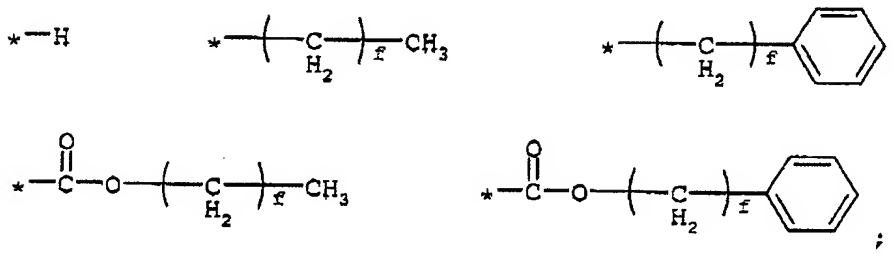
;

Q is



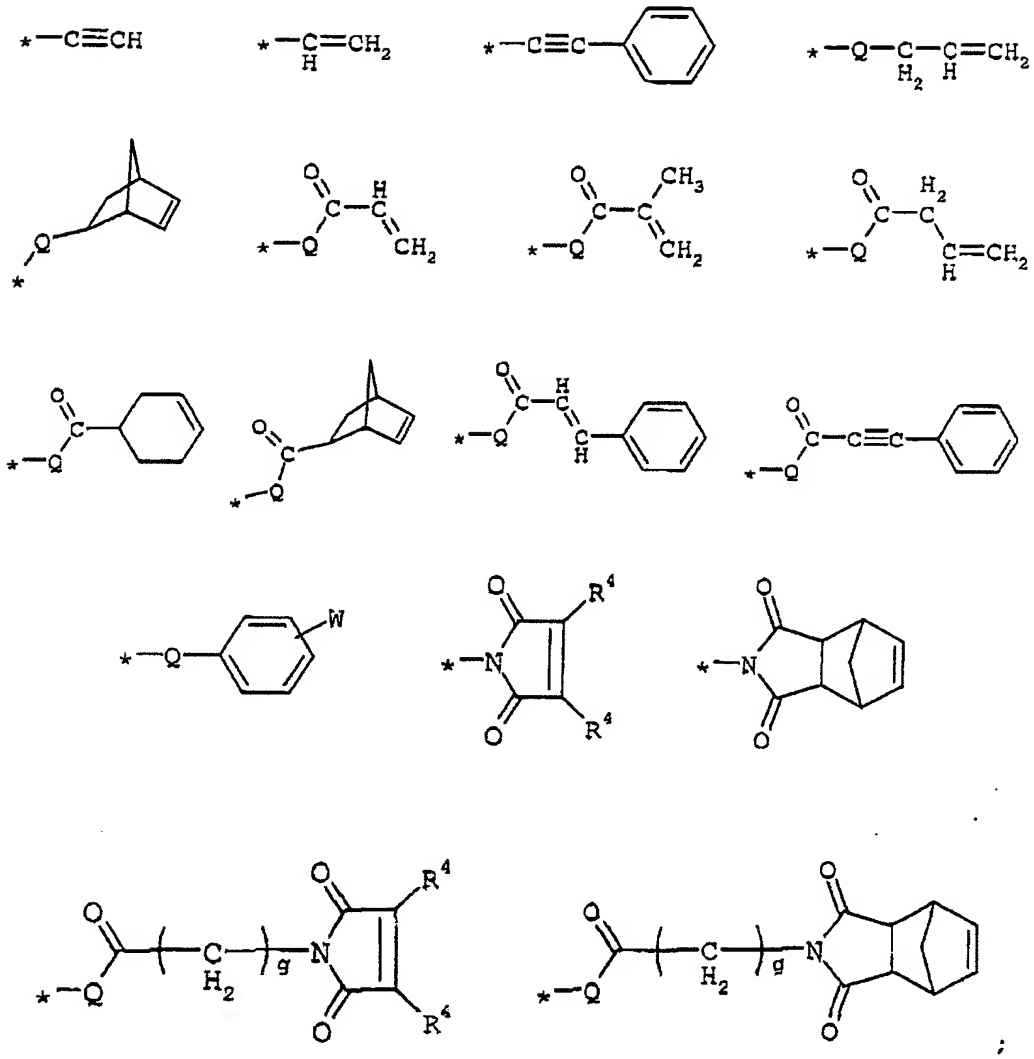
;

R^1 is a substituent selected from the group consisting of:

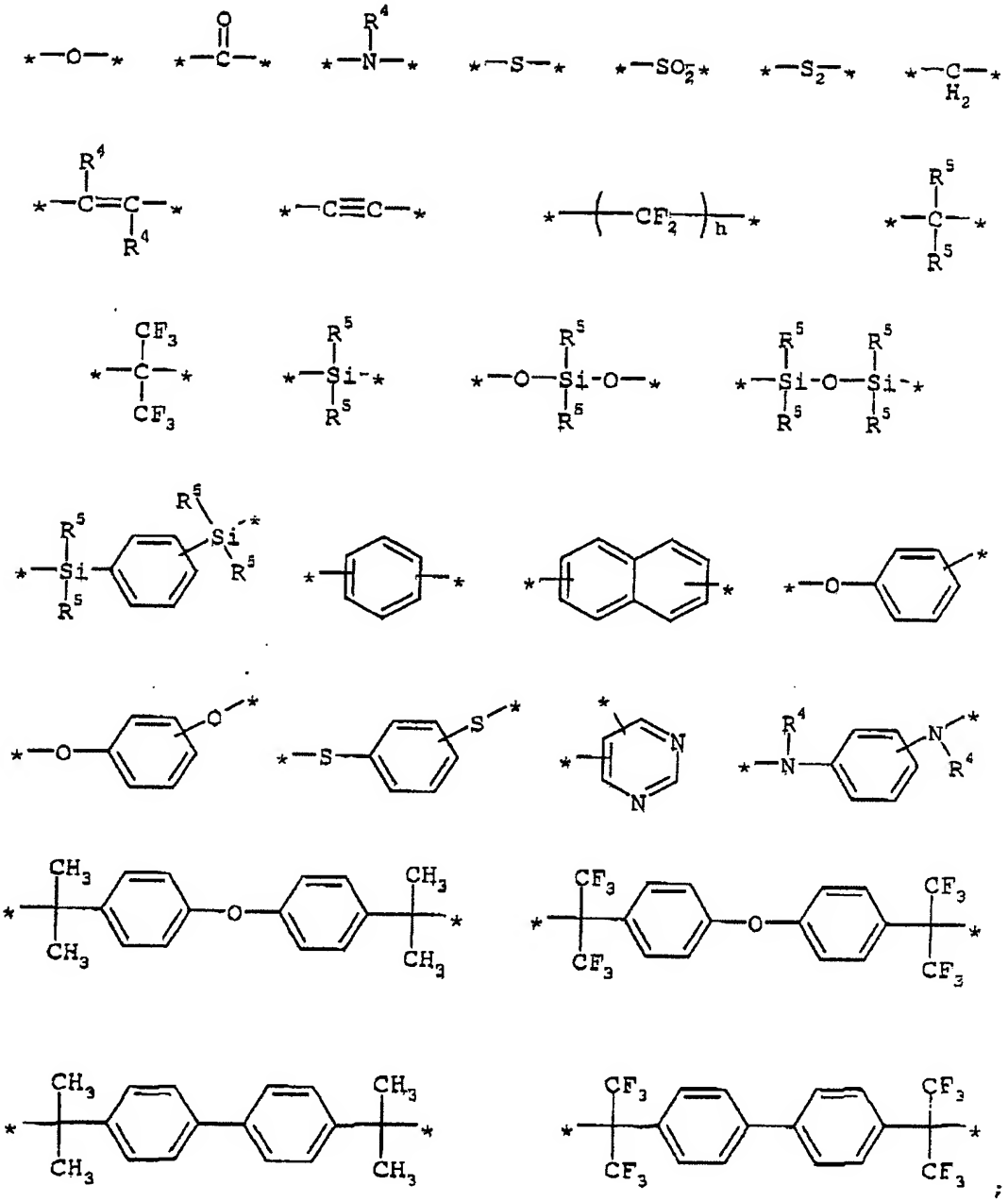


;

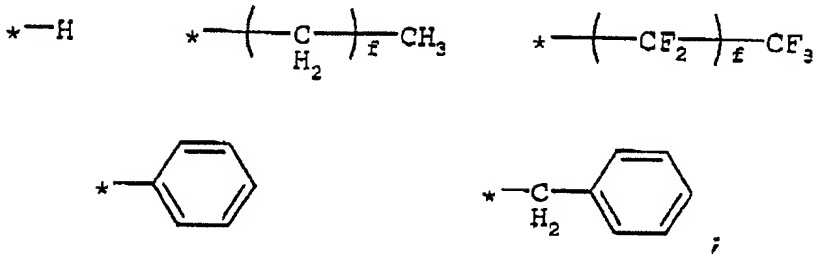
R^2 is a substituent selected from the group consisting of -H, -CF_3, -OH, -SH, -COOH, -$N(R^5)_2$, an alkyl group, an aryl group, a heteroaryl group and



R^3 is a substituent selected from the group consisting of:



R^4 is a substituent selected from the group consisting of:



;

R^5 is a substituent selected from the group consisting of an alkyl, an aryl, and a heteroaryl radical;

a is an integer from 0 to 1;

b is an integer from 1 to 200;

c is an integer from 0 10 200;

d is an integer from 0 to 1;

e is an integer from 0 to 10;

f is an integer from 0 to 10;

g is an integer from 0 to 10;

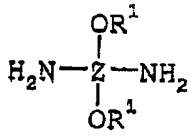
h is an integer from 1 to 10;

n is an integer from 0 to 1; and

x is an integer from 0 to 10 if R^3 is $-CH_2-$;

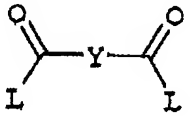
the process which comprises:

providing a monomer having a formula II



Formula II;

reacting the monomer with at least one of a dicarboxylic acid and an activated dicarboxylic acid derivative having a formula III



Formula III

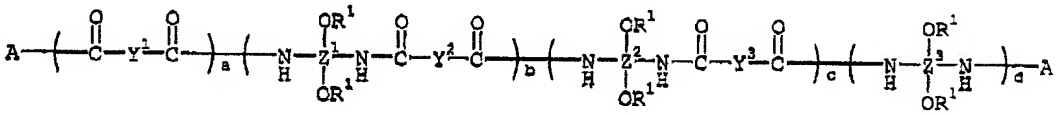
wherein:

L is selected from the group consisting of a hydroxyl group and an activating group, and

Y is selected from the group consisting of Y^1, Y^2, and Y^3.

9. The process according to claim 8, which further comprises including a base during the reacting step.

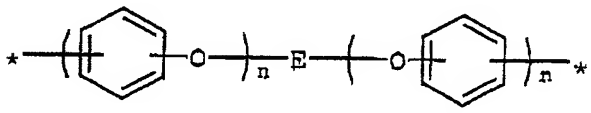
10. A process for preparing a polybenzoxazole, which comprises heating a poly-o-hydroxyamides having a formula I



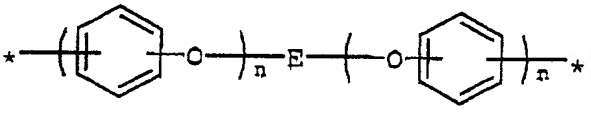
FORMULA I

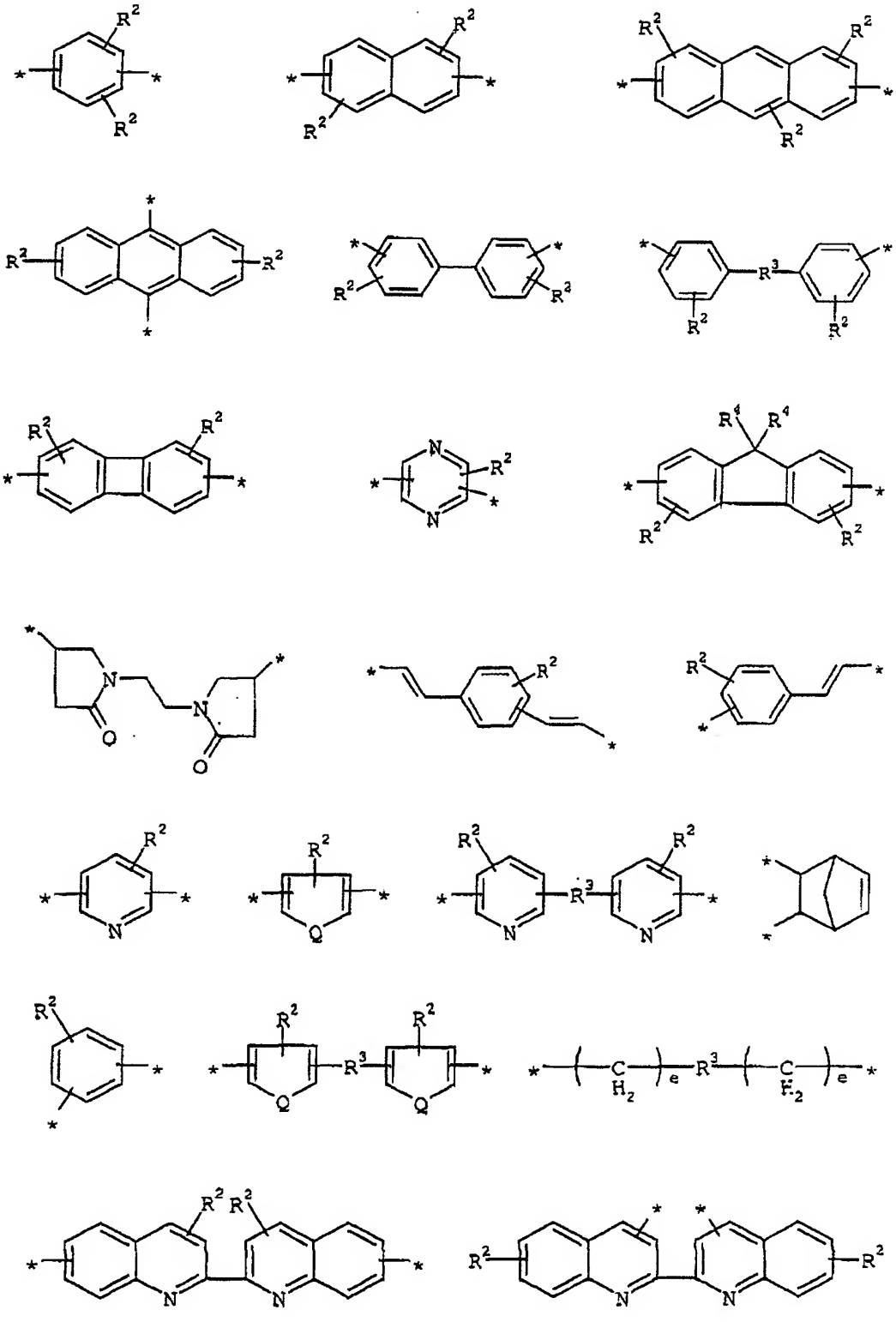
wherein:

Y^2 is

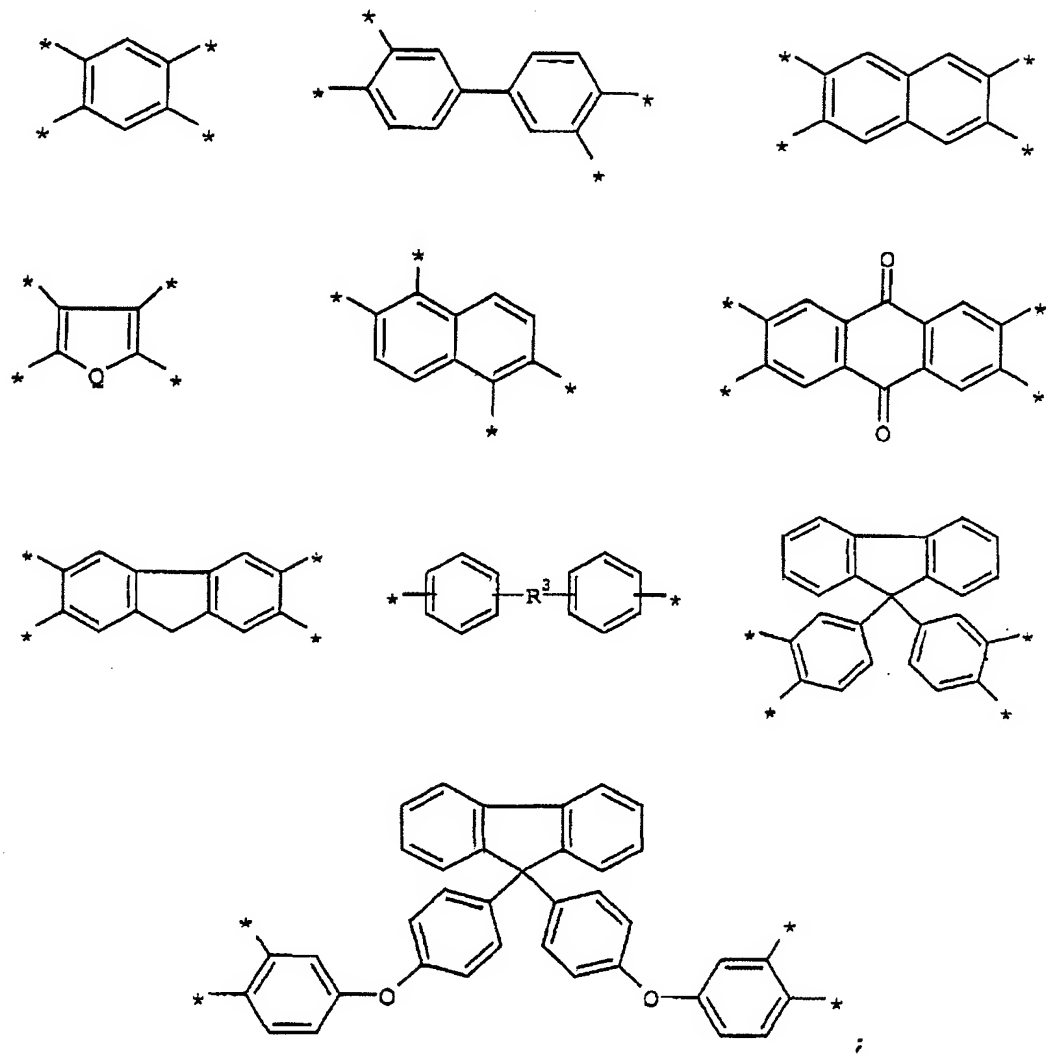


Y^1 and Y^3, in each case independently of one another, are a substituent selected from the group consisting of:

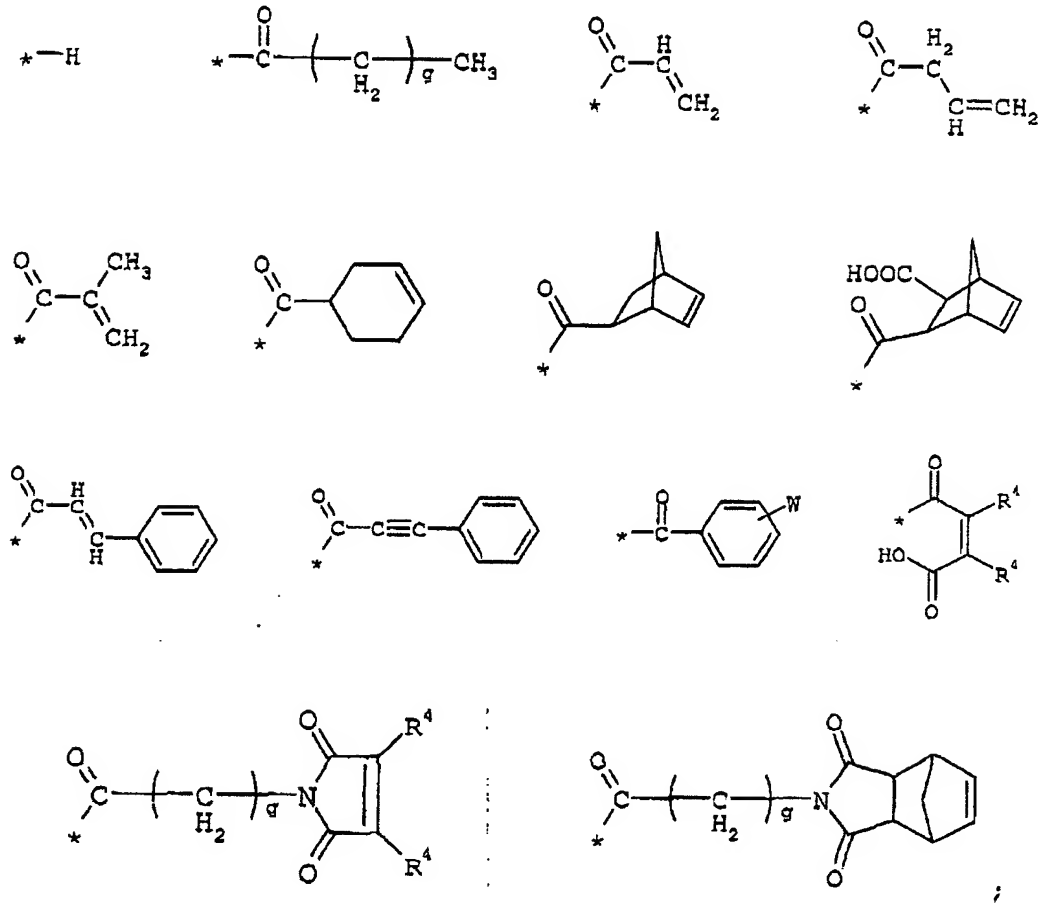




Z^1, Z^2, and Z^3, in each case independently, are substituents selected from the group consisting of:

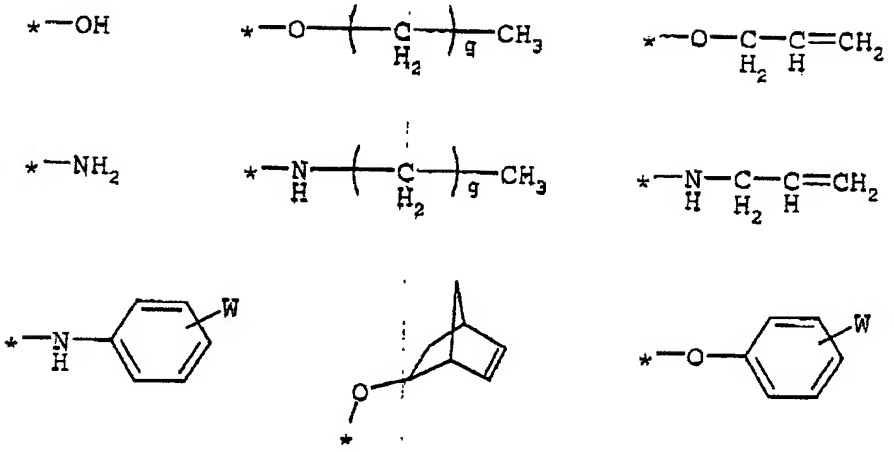


A, if at least one of a = 0 and d = 1, is a substituent selected from the group consisting of:

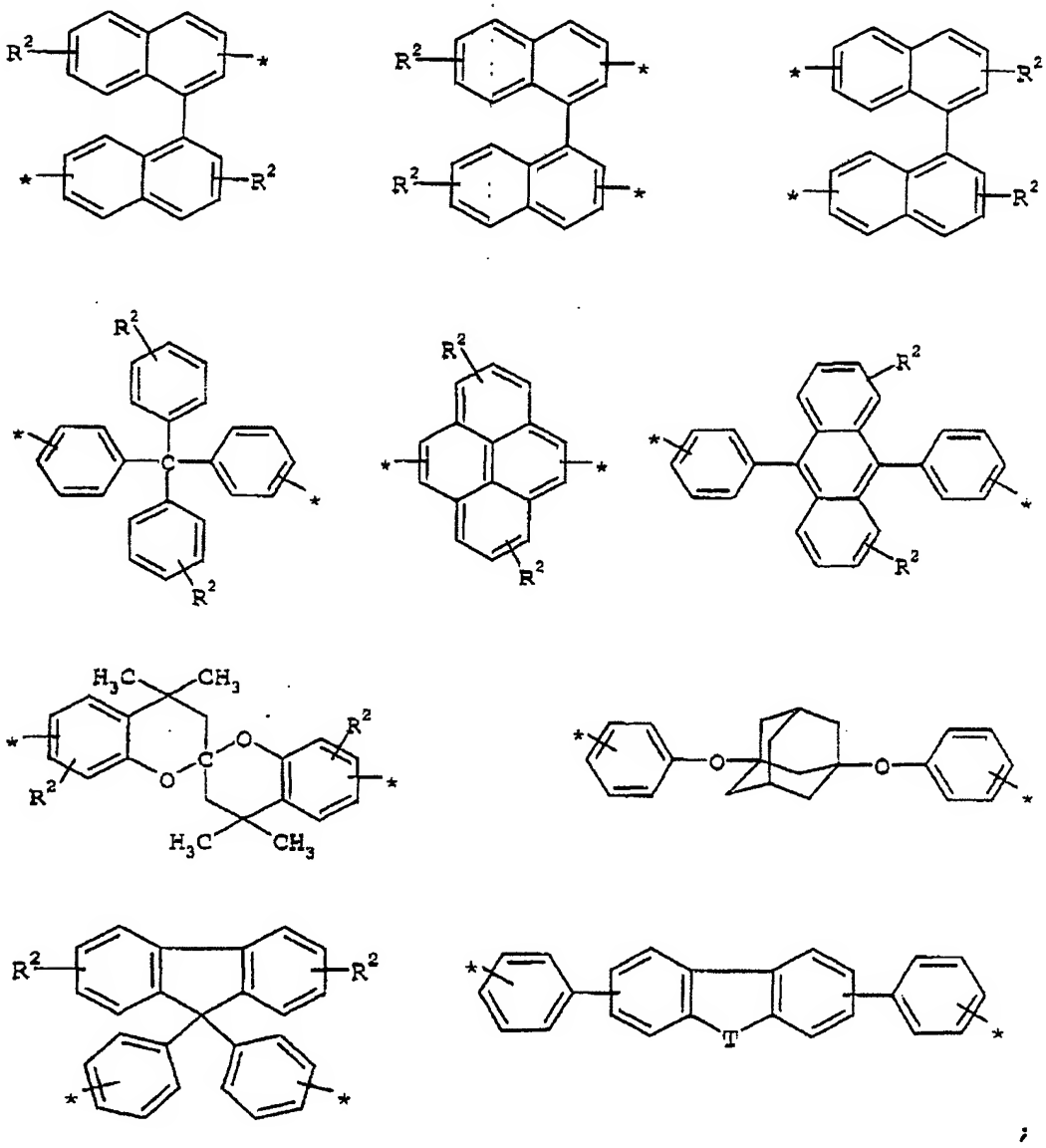


;

A, if at least one of a = 1 and d = 0, is a substituent selected from the group consisting of:

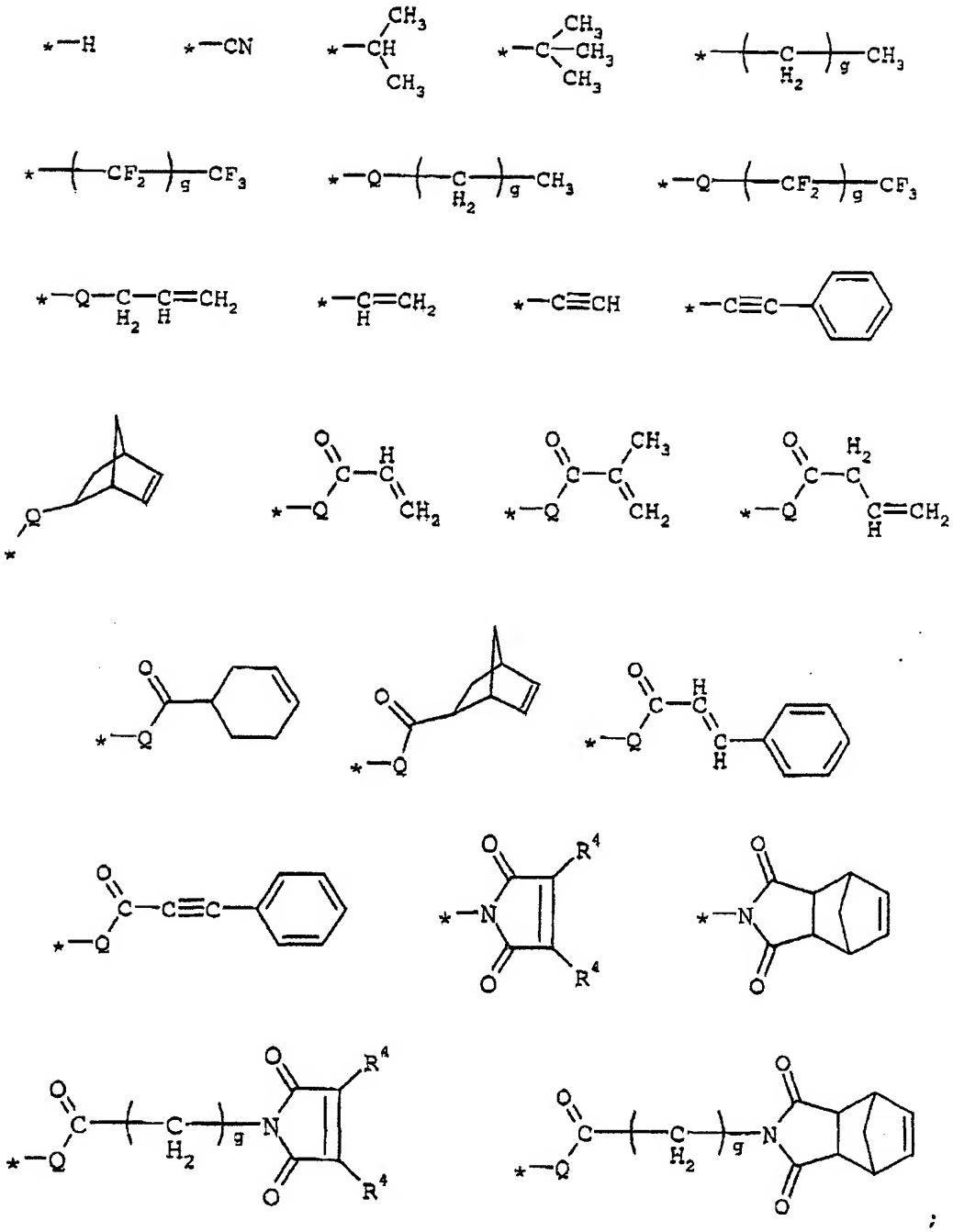


E is a substituent selected from the group consisting of:



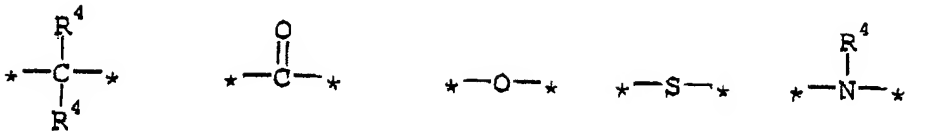
;

W is a substituent selected from the group consisting of:



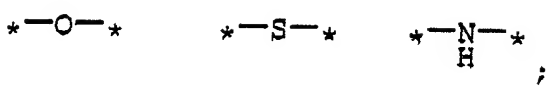
;

T is a substituent selected from the group consisting of:



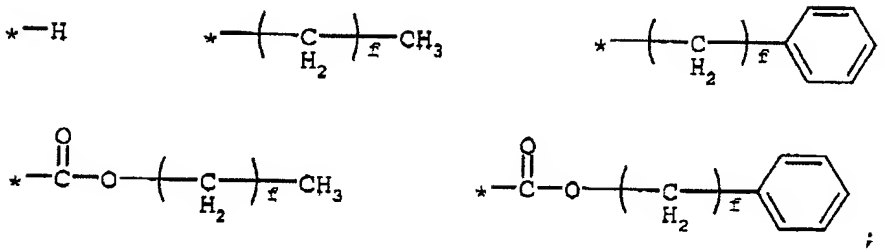
;

Q is



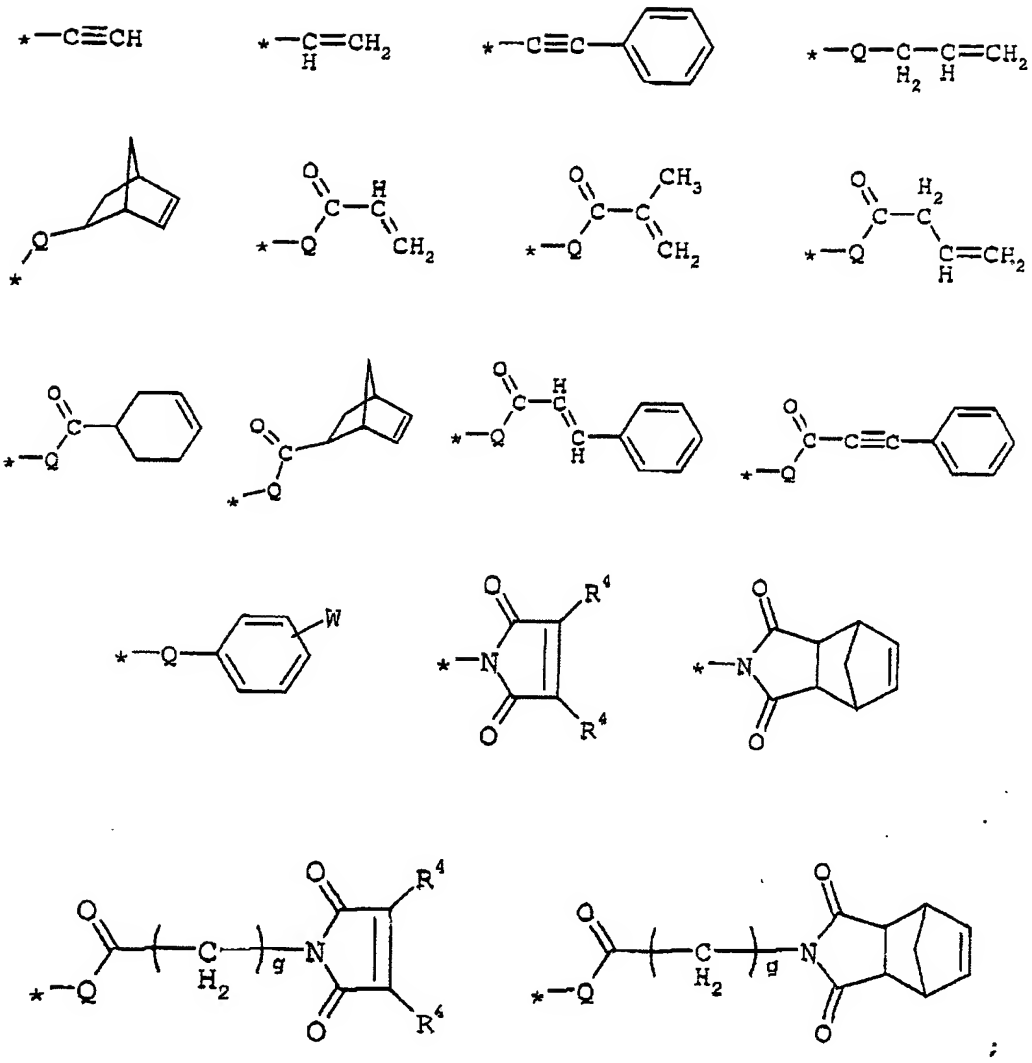
;

R^1 is a substituent selected from the group consisting of:

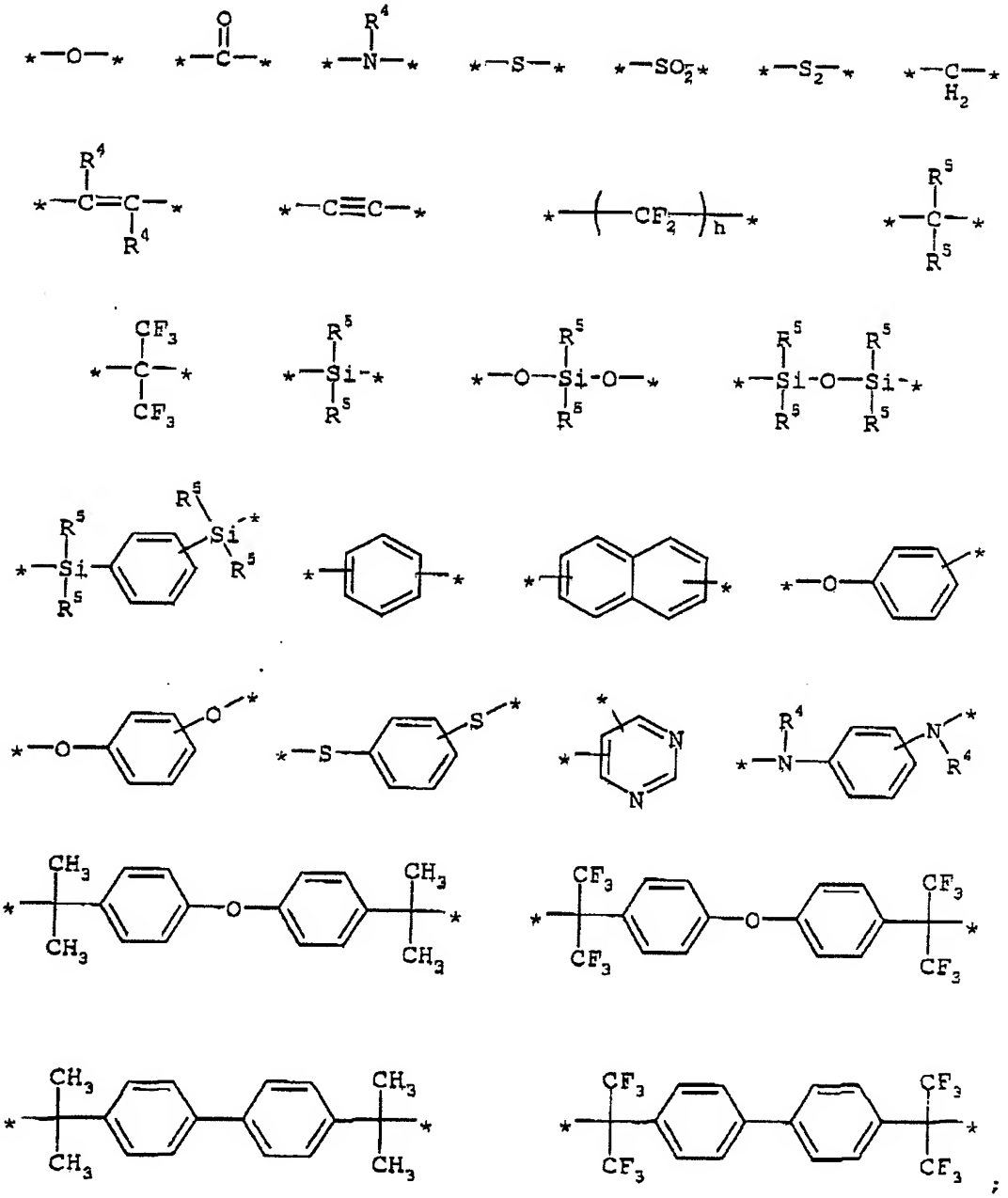


;

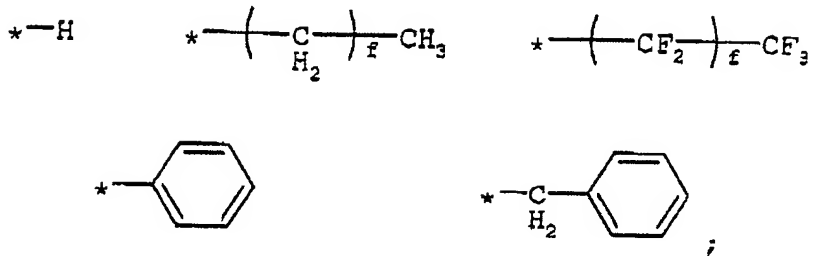
R^2 is a substituent selected from the group consisting of -H, -CF_3, -OH, -SH, -COOH, -$N(R^5)_2$, an alkyl group, an aryl group, a heteroaryl group and



R^3 is a substituent selected from the group consisting of:



R^4 is a substituent selected from the group consisting of:



;

R^5 is a substituent selected from the group consisting of an alkyl, an aryl, and a heteroaryl radical;

a is an integer from 0 to 1;

b is an integer from 1 to 200;

c is an integer from 0 10 200;

d is an integer from 0 to 1;

e is an integer from 0 to 10;

f is an integer from 0 to 10;

g is an integer from 0 to 10;

h is an integer from 1 to 10;

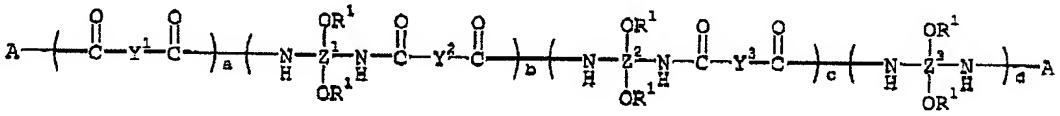
n is an integer from 0 to 1; and

x is an integer from 0 to 10 if R^3 is $-CH_2-$.

11. An electronic component, comprising a dielectric including a polybenzoxazole according to claim 7.

12. A process for producing an electronic component including a dielectric made of a polybenzoxazole, which comprises:

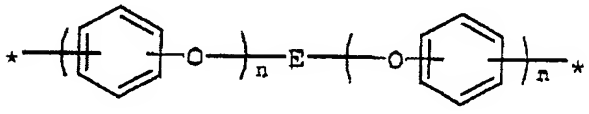
preparing a solution of a poly-o-hydroxyamide having a formula I in a solvent;



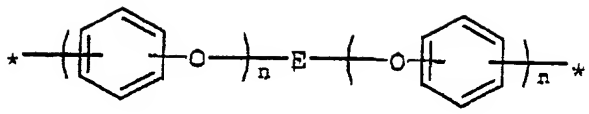
FORMULA I

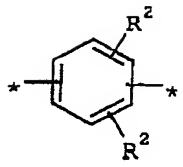
wherein:

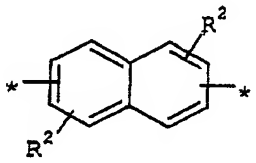
Y^2 is

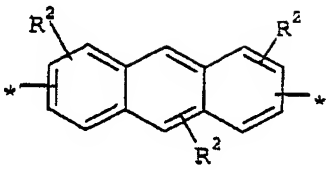


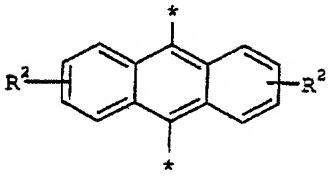
Y^1 and Y^3, in each case independently of one another, are a substituent selected from the group consisting of:

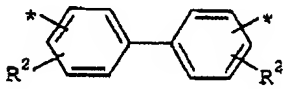


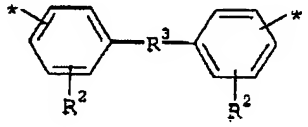


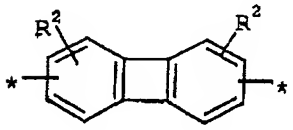


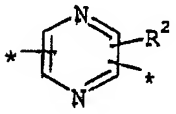


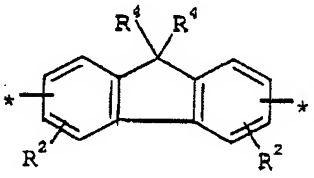


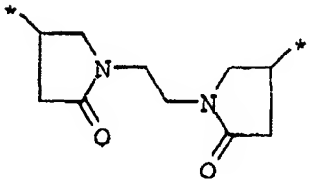


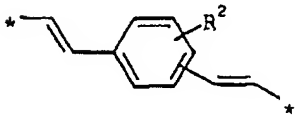


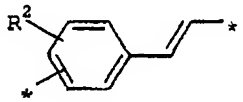


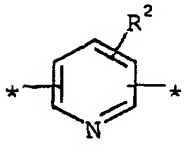


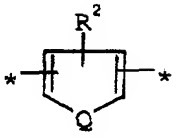


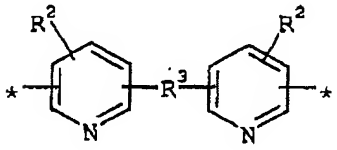


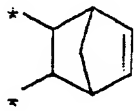


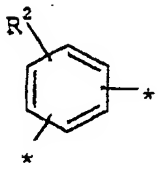


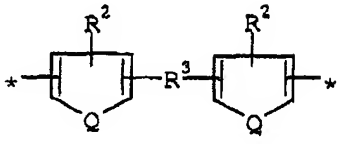


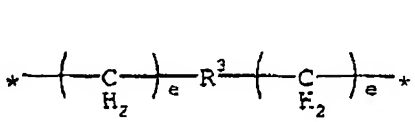


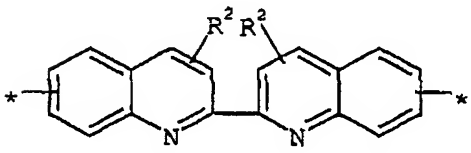


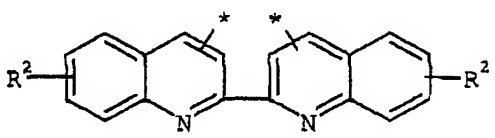




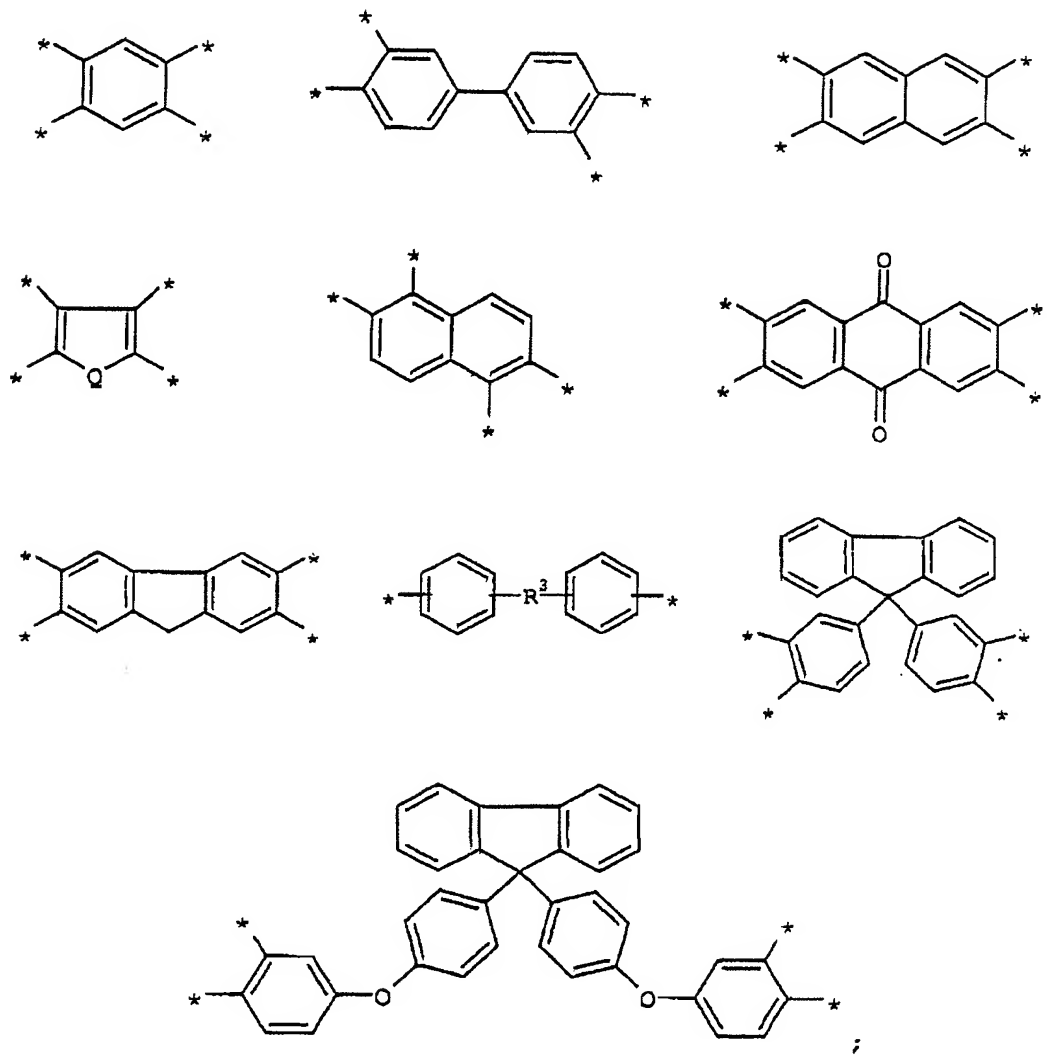






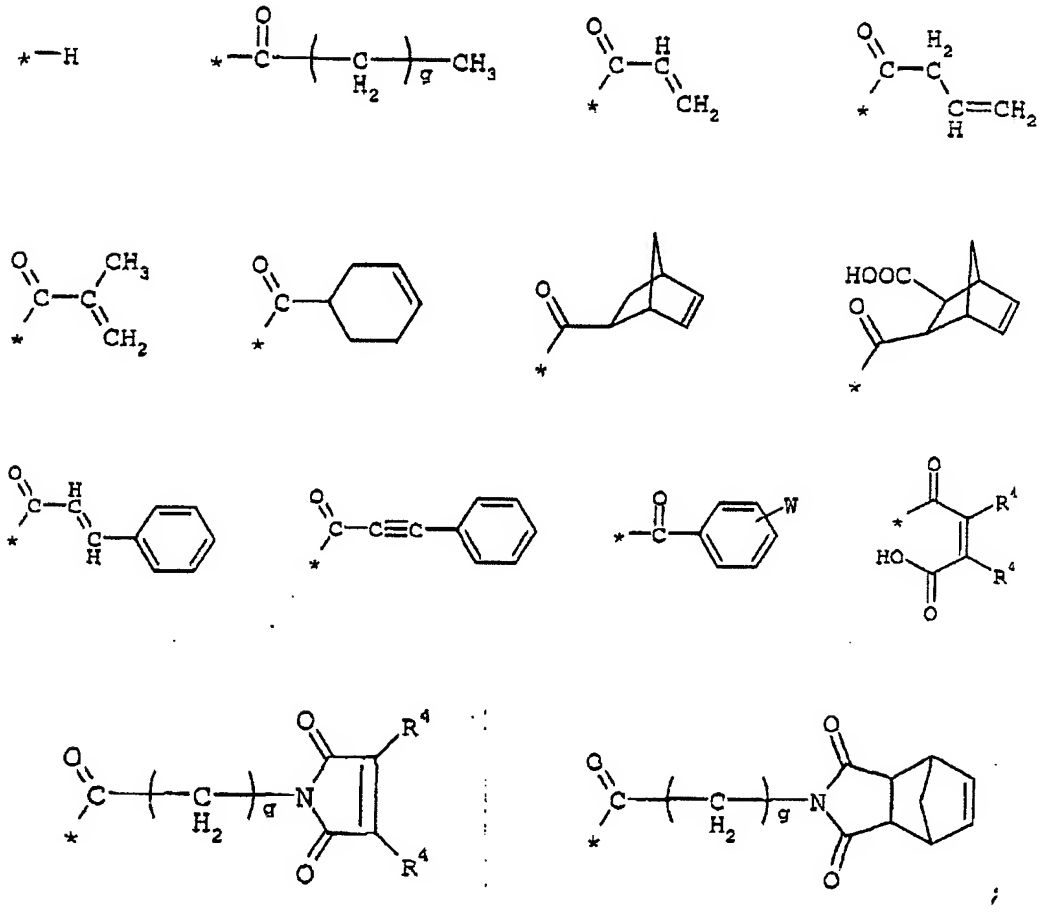


Z^1, Z^2, and Z^3, in each case independently, are substituents selected from the group consisting of:

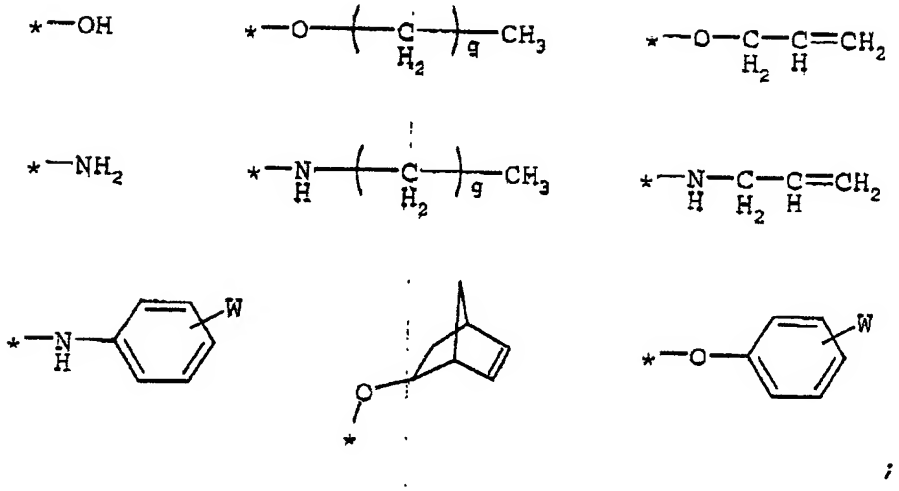


;

A, if at least one of a = 0 and d = 1, is a substituent selected from the group consisting of:

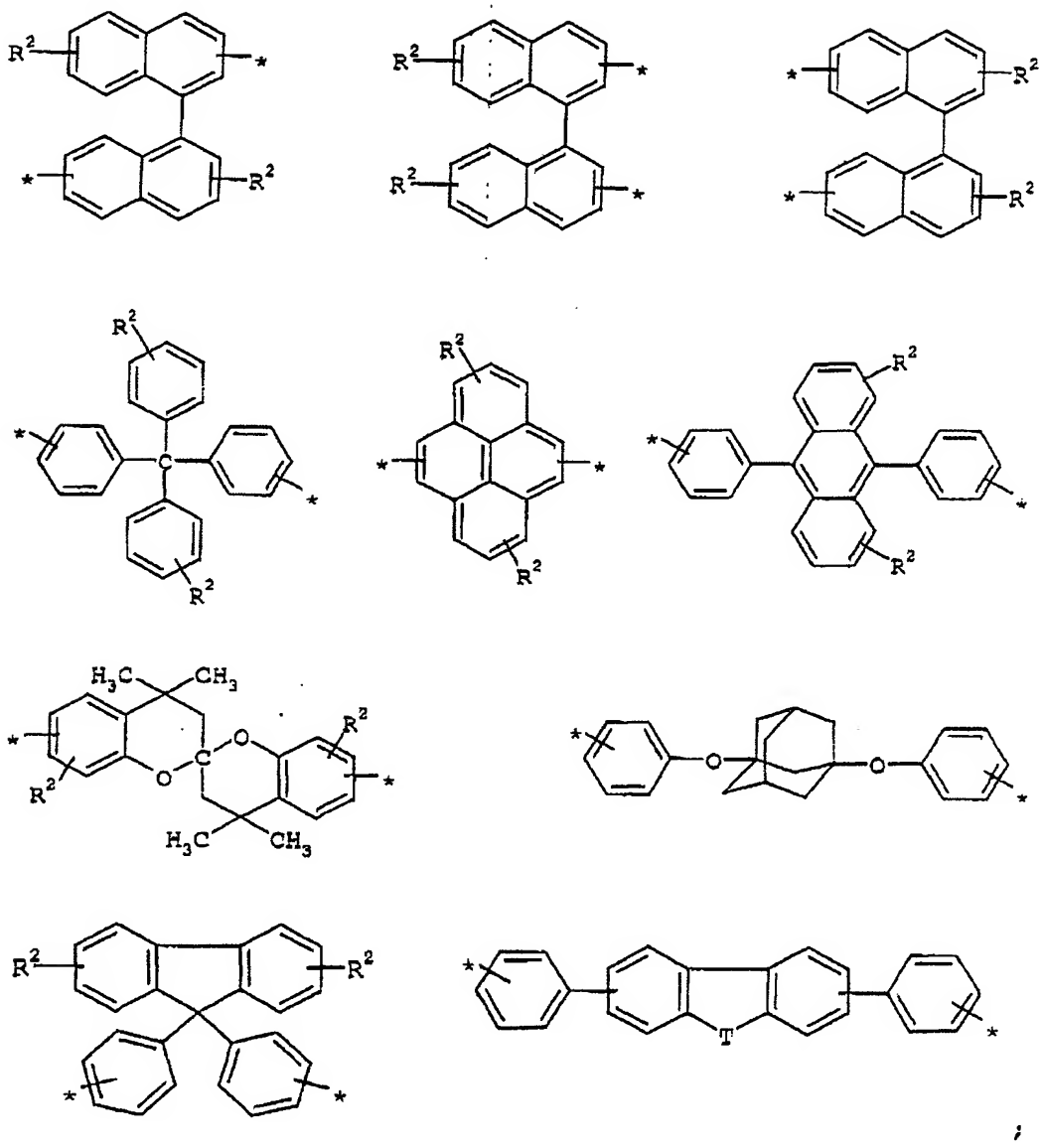


A, if at least one of a = 1 and d = 0, is a substituent selected from the group consisting of:

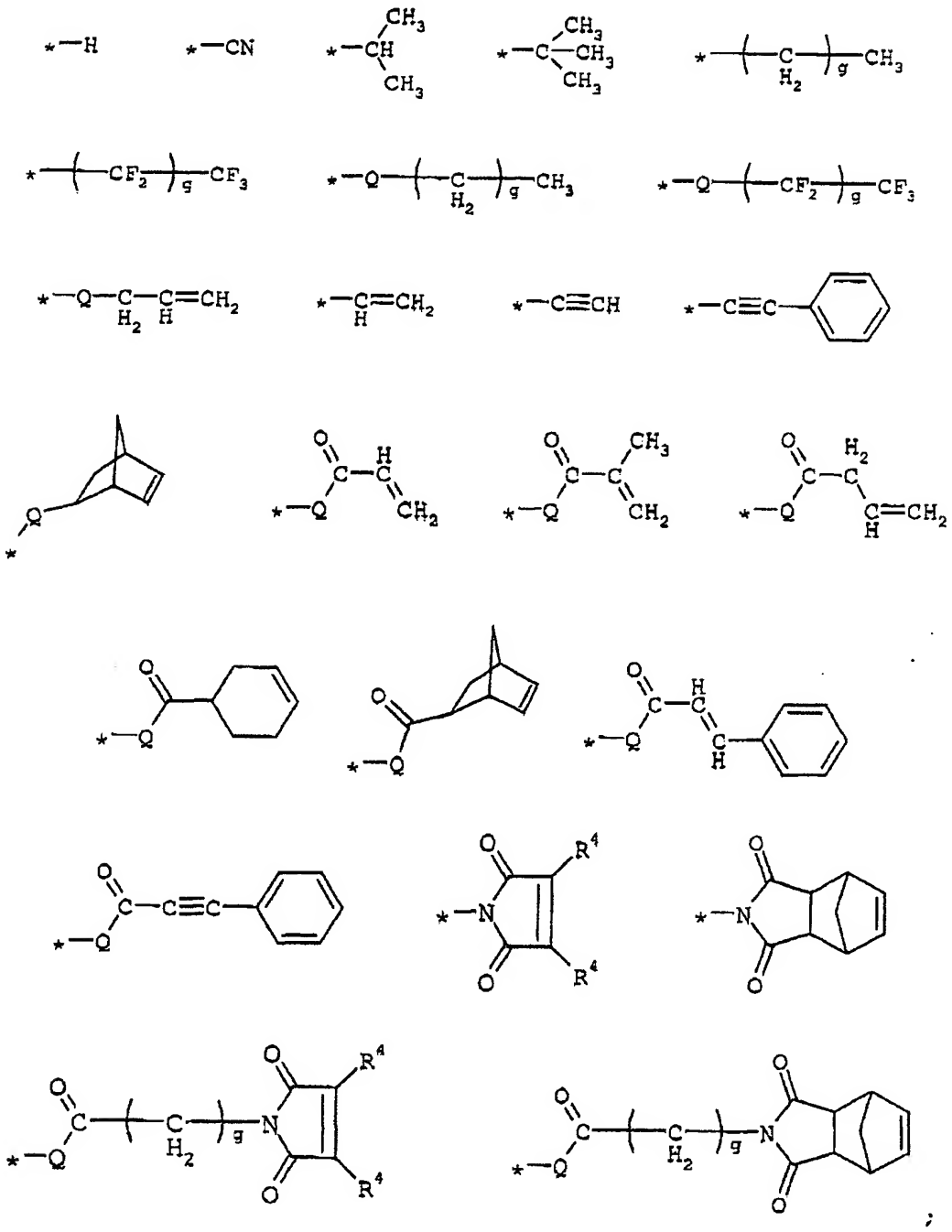


;

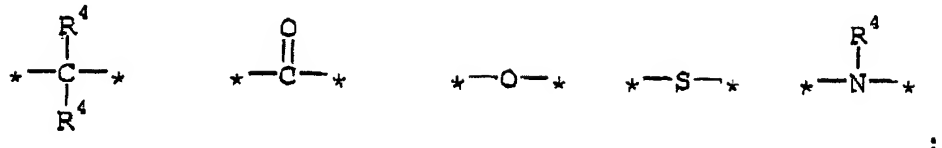
E is a substituent selected from the group consisting of:



W is a substituent selected from the group consisting of:

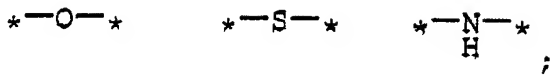


T is a substituent selected from the group consisting of:



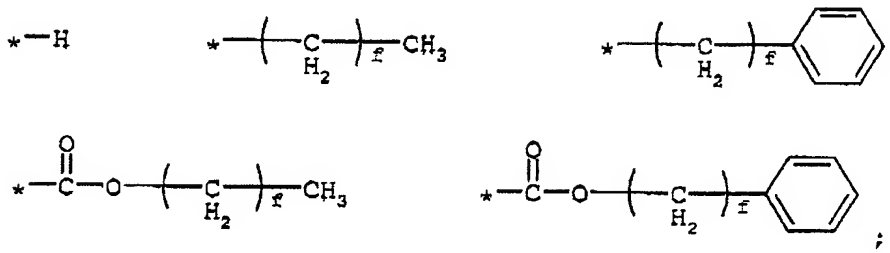
;

Q is



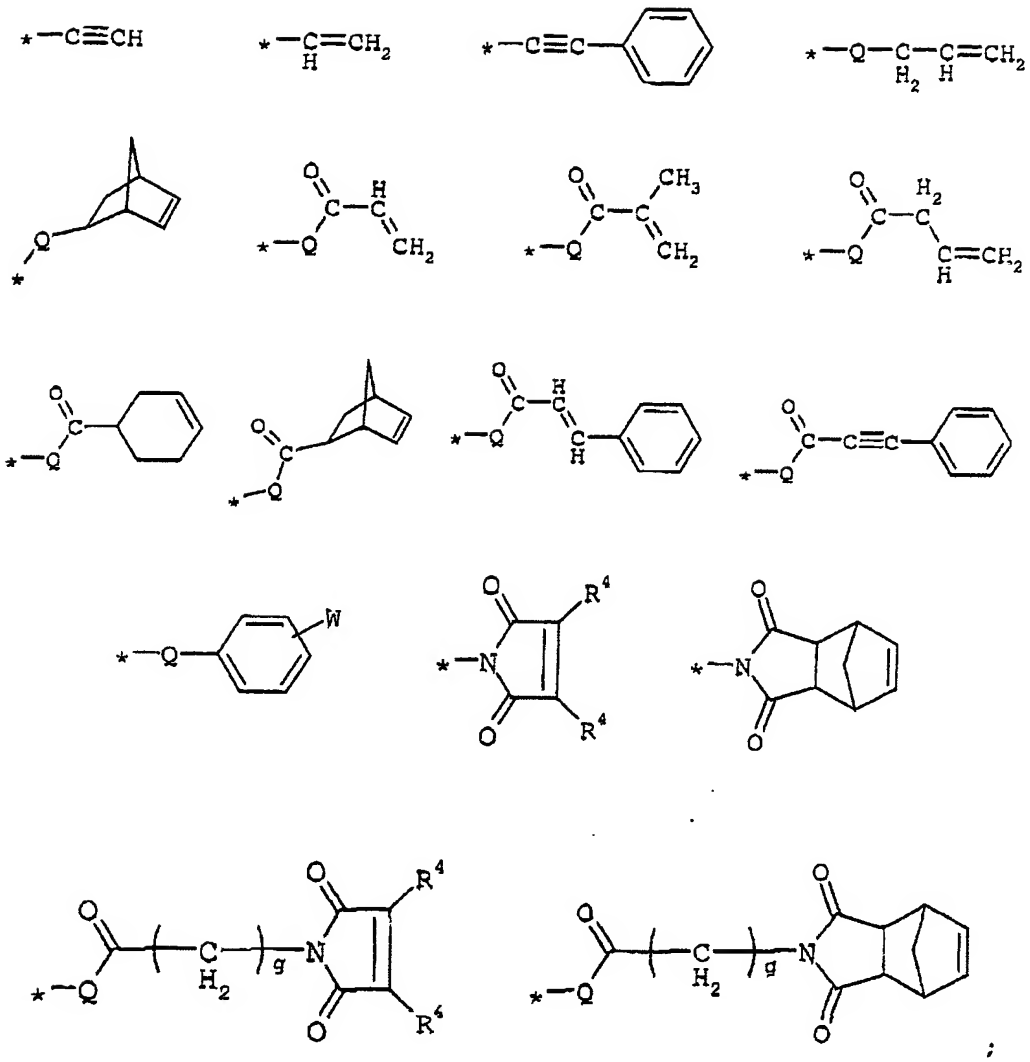
;

R^1 is a substituent selected from the group consisting of:

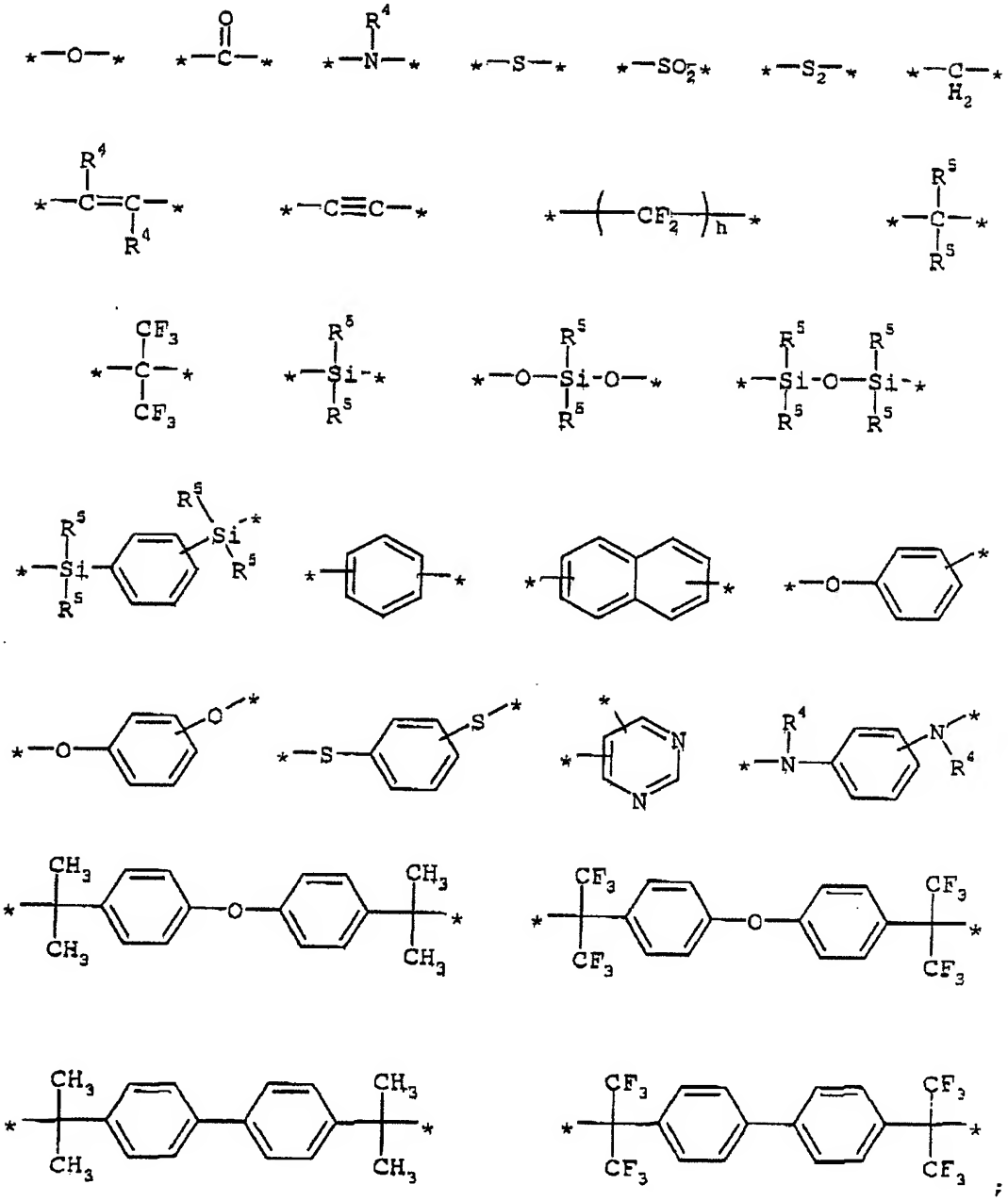


;

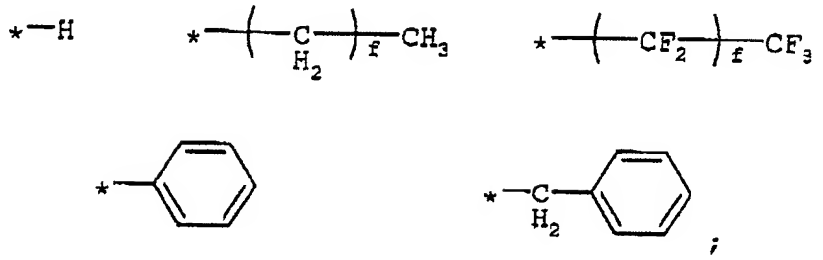
R^2 is a substituent selected from the group consisting of -H, -CF_3, -OH, -SH, -COOH, -$N(R^5)_2$, an alkyl group, an aryl group, a heteroaryl group and



R^3 is a substituent selected from the group consisting of:



R^4 is a substituent selected from the group consisting of:



;

R^5 is a substituent selected from the group consisting of an alkyl, an aryl, and a heteroaryl radical;

a is an integer from 0 to 1;

b is an integer from 1 to 200;

c is an integer from 0 10 200;

d is an integer from 0 to 1;

e is an integer from 0 to 10;

f is an integer from 0 to 10;

g is an integer from 0 to 10;

h is an integer from 1 to 10;

n is an integer from 0 to 1; and

x is an integer from 0 to 10 if R^3 is $-CH_2-$;

applying the solution to a substrate;

evaporating the solvent to obtain a film;

heating the film to cyclize the poly-o-hydroxyamide of the formula I to give the polybenzoxazole according claim 7;

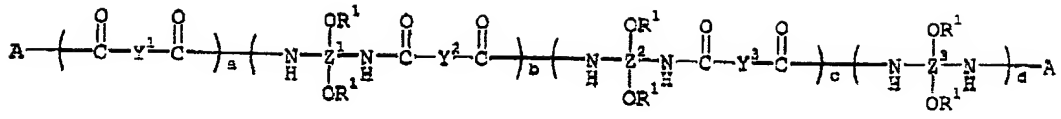
structuring the film to obtain a resist structure having trenches and contact holes formed therein;

depositing a conductive material on the resist structure to fill the trenches and the contact holes with the conductive material; and

removing an excess of the conductive material.

13. A process for producing an electronic component, which comprises:

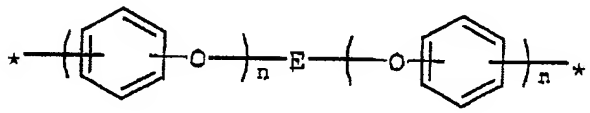
preparing a solution of a poly-o-hydroxyamide having a formula I in a solvent;



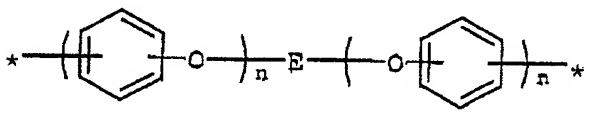
FORMULA I

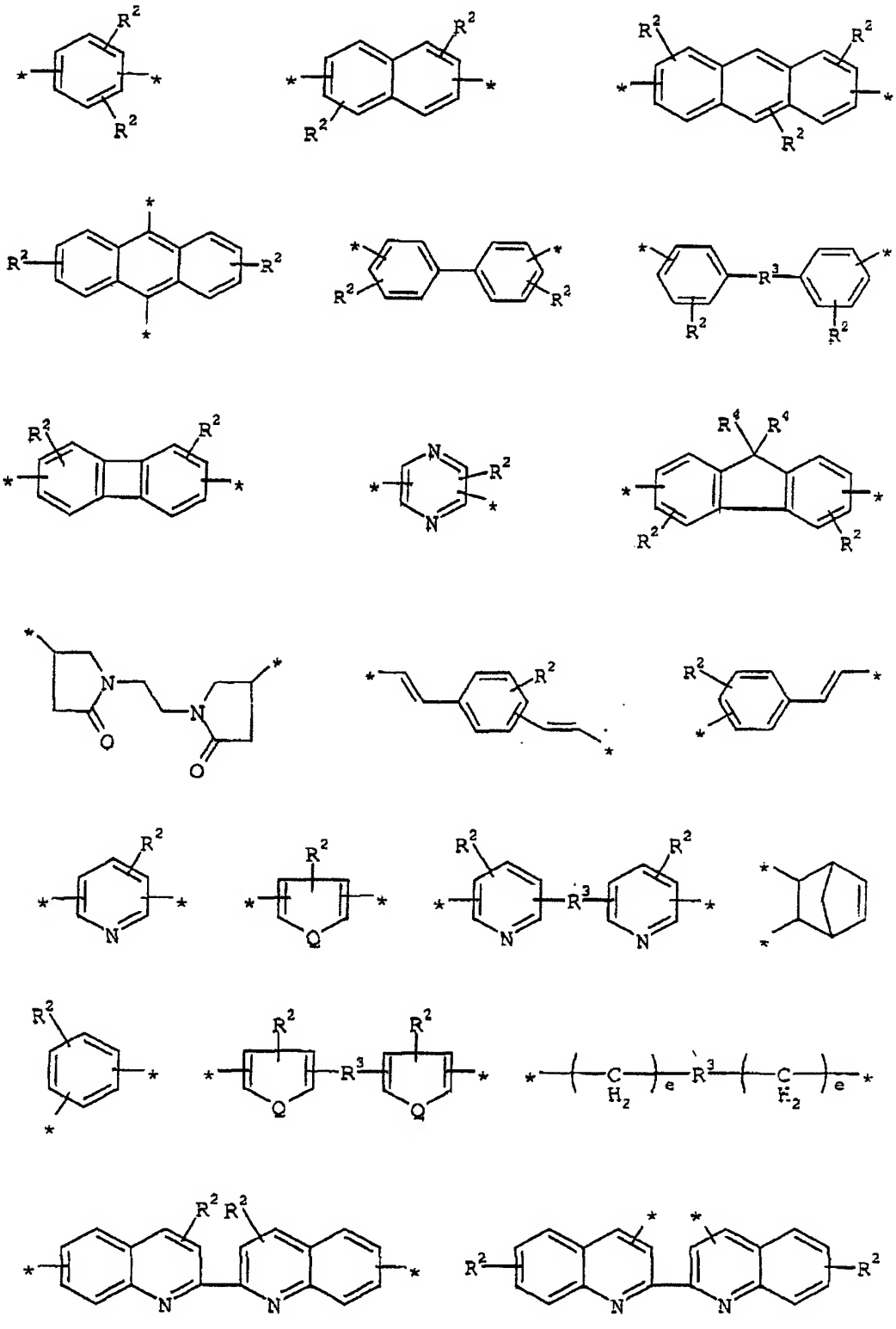
wherein:

Y^2 is

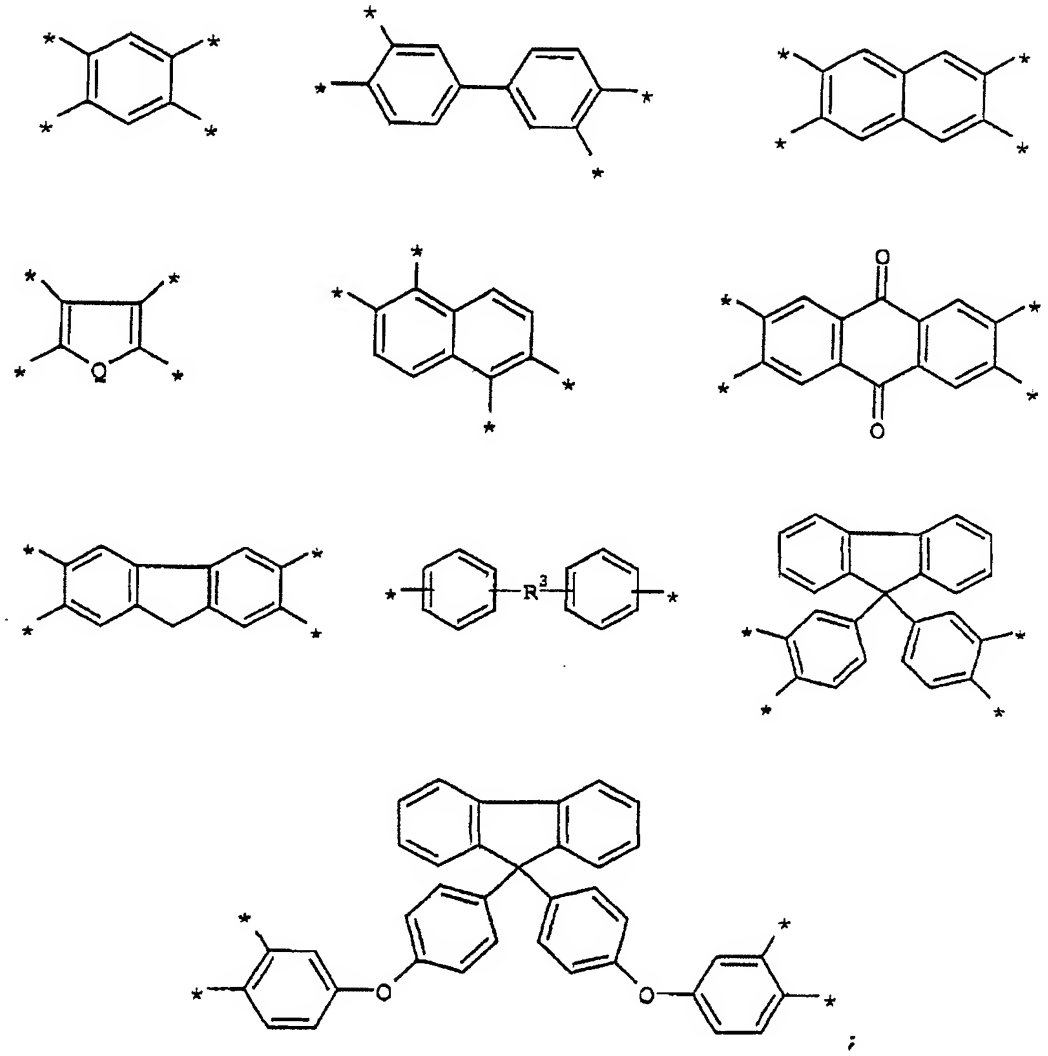


Y^1 and Y^3, in each case independently of one another, are a substituent selected from the group consisting of:

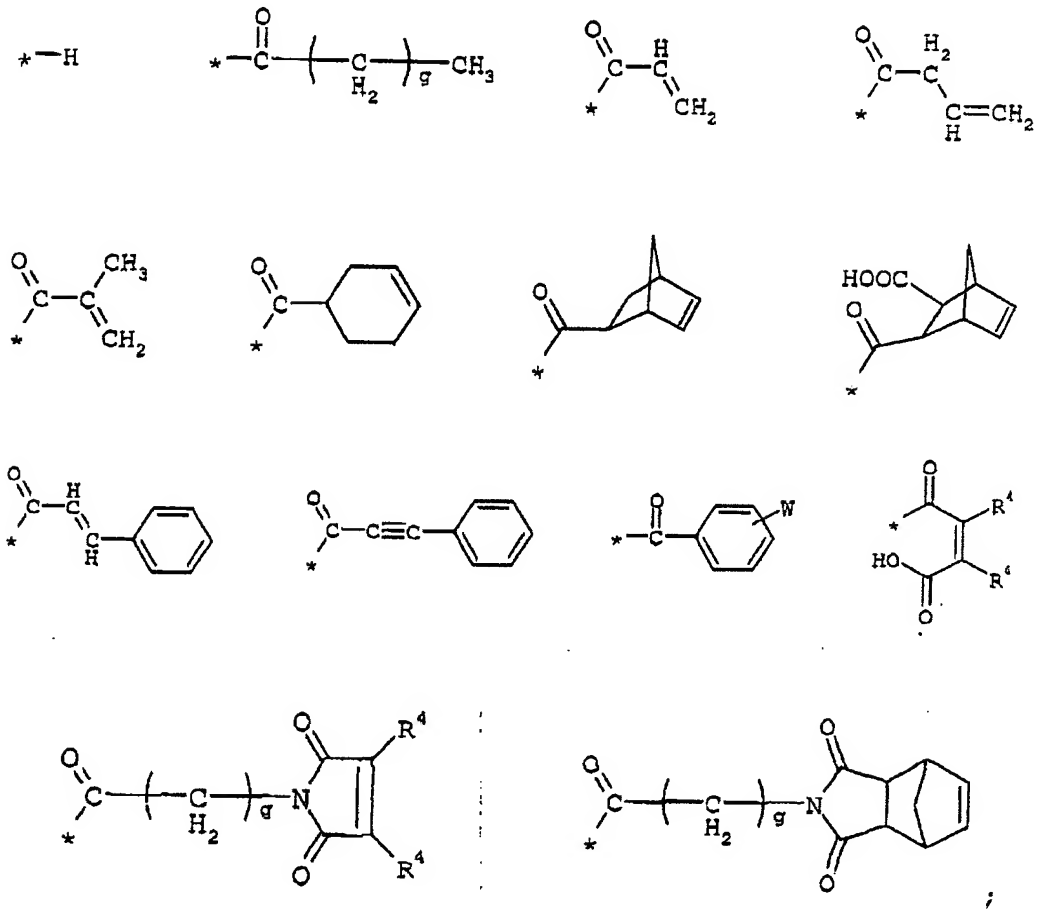




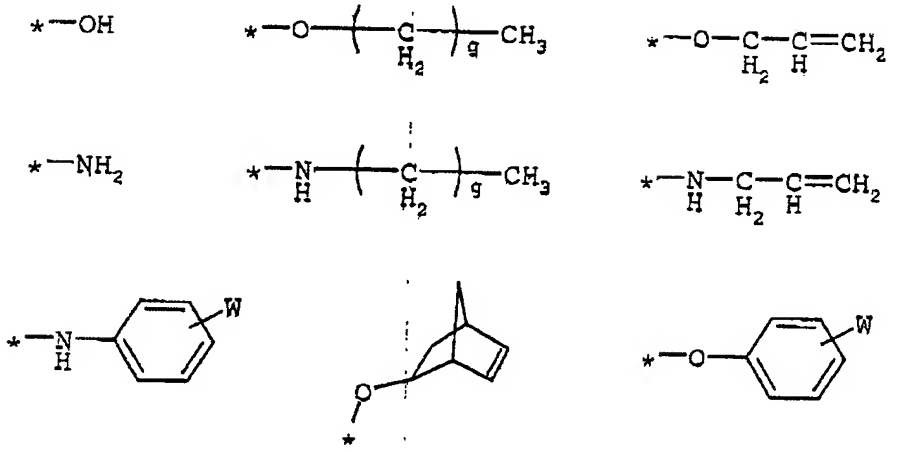
Z^1, Z^2, and Z^3, in each case independently, are substituents selected from the group consisting of:



A, if at least one of a = 0 and d = 1, is a substituent selected from the group consisting of:

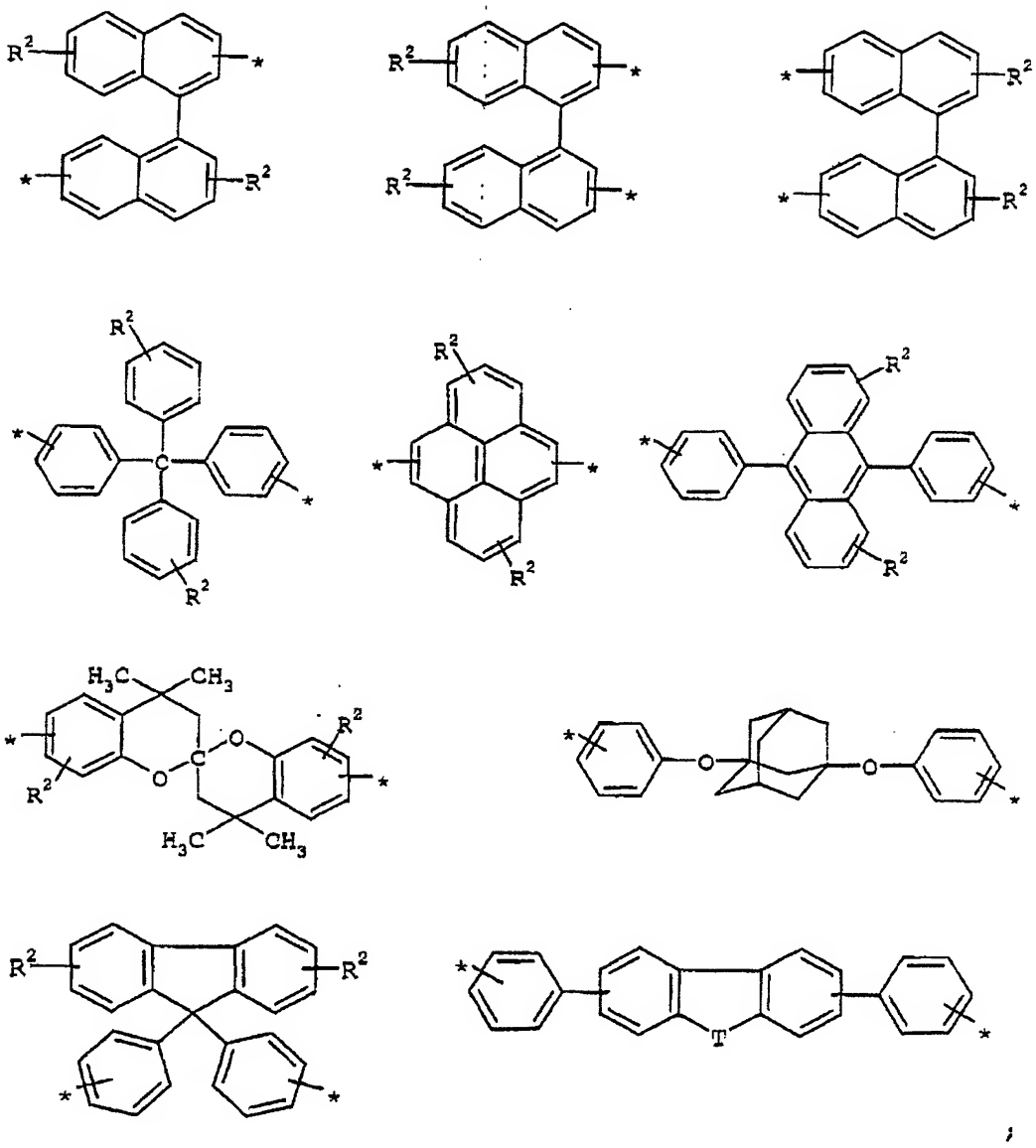


A, if at least one of a = 1 and d = 0, is a substituent selected from the group consisting of:

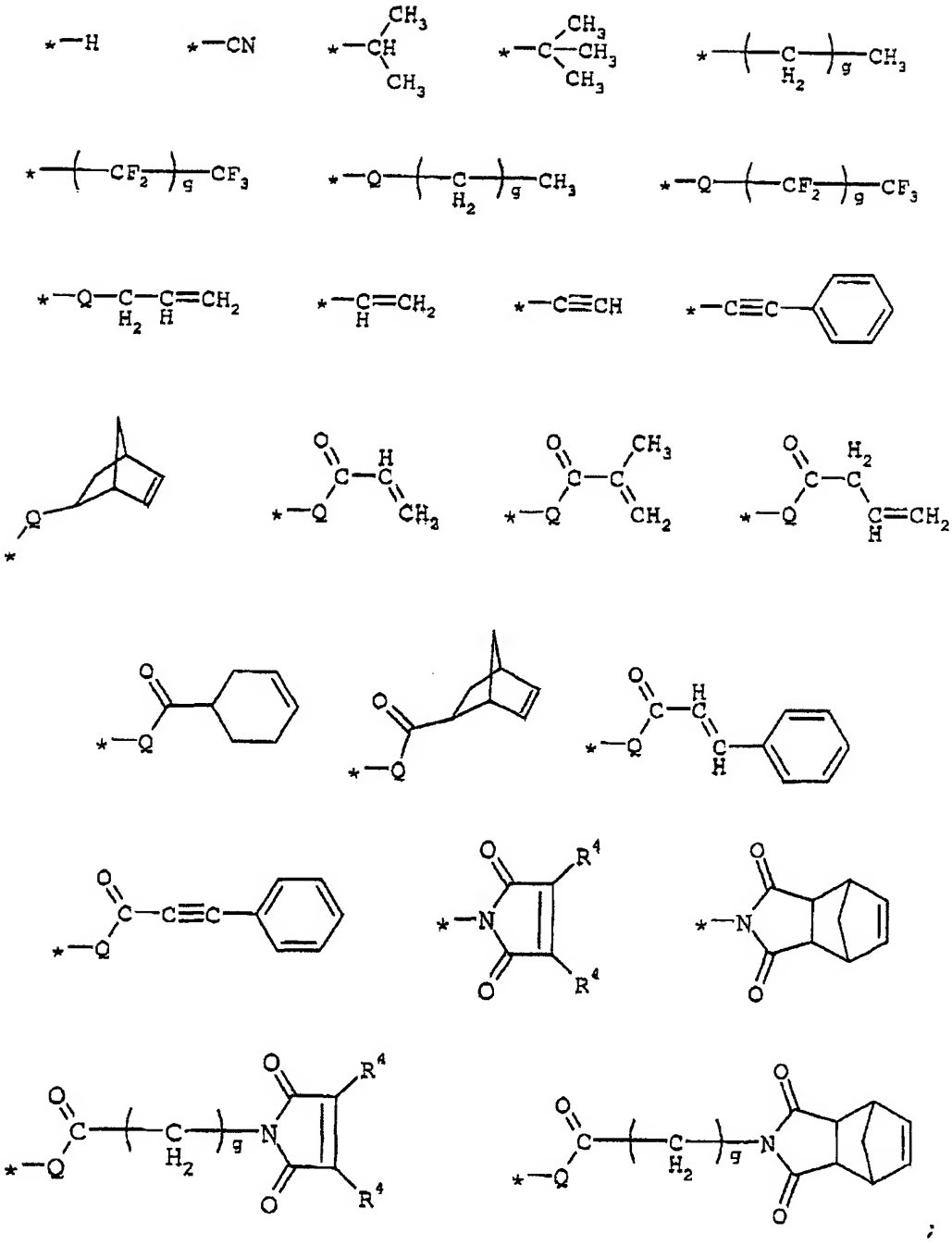


;

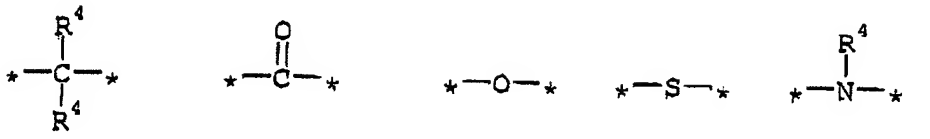
E is a substituent selected from the group consisting of:



W is a substituent selected from the group consisting of:

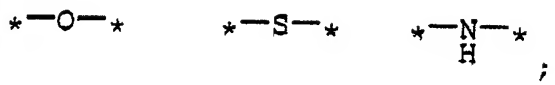


T is a substituent selected from the group consisting of:



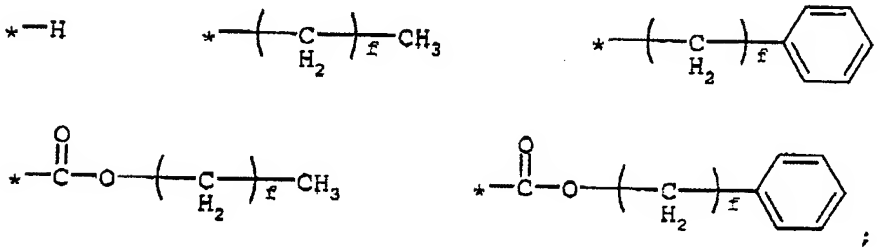
;

Q is



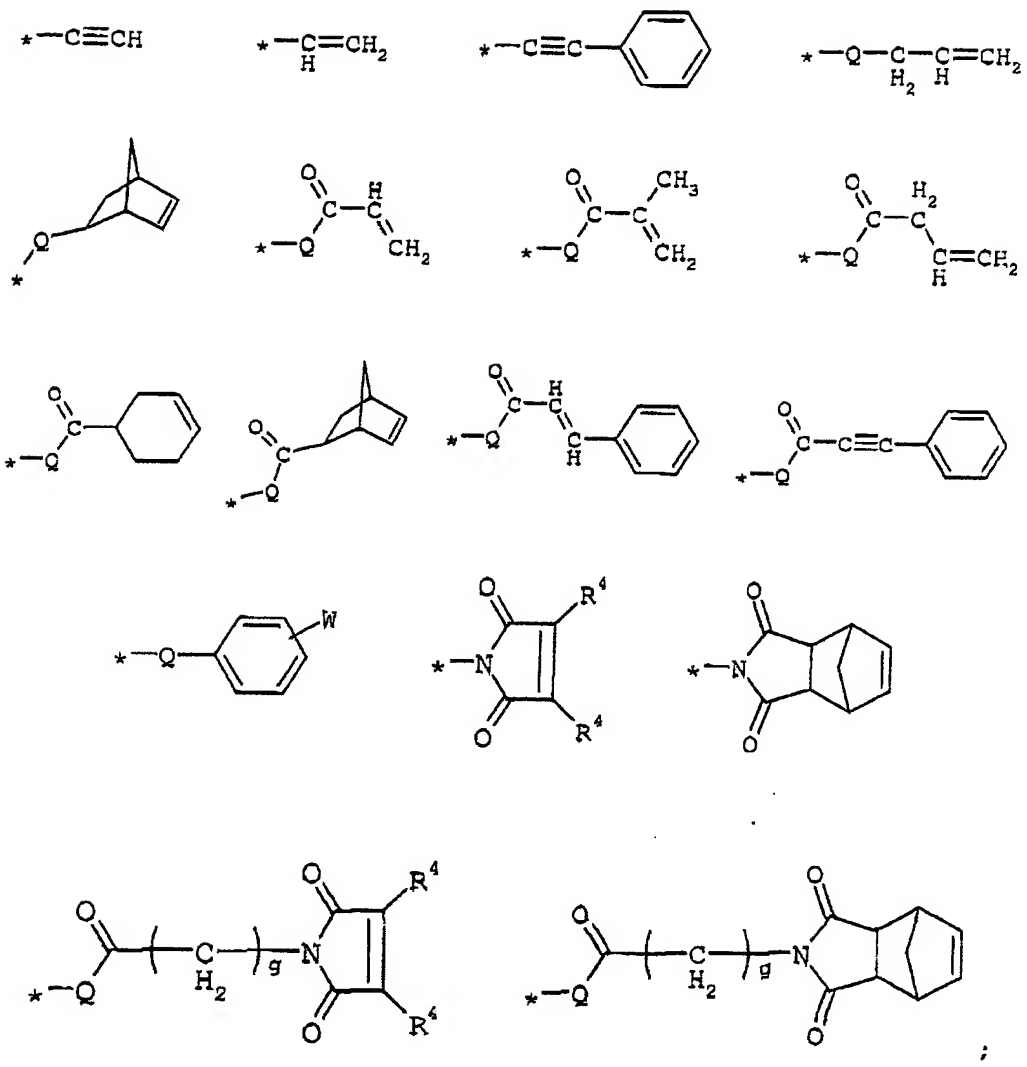
;

R^1 is a substituent selected from the group consisting of:



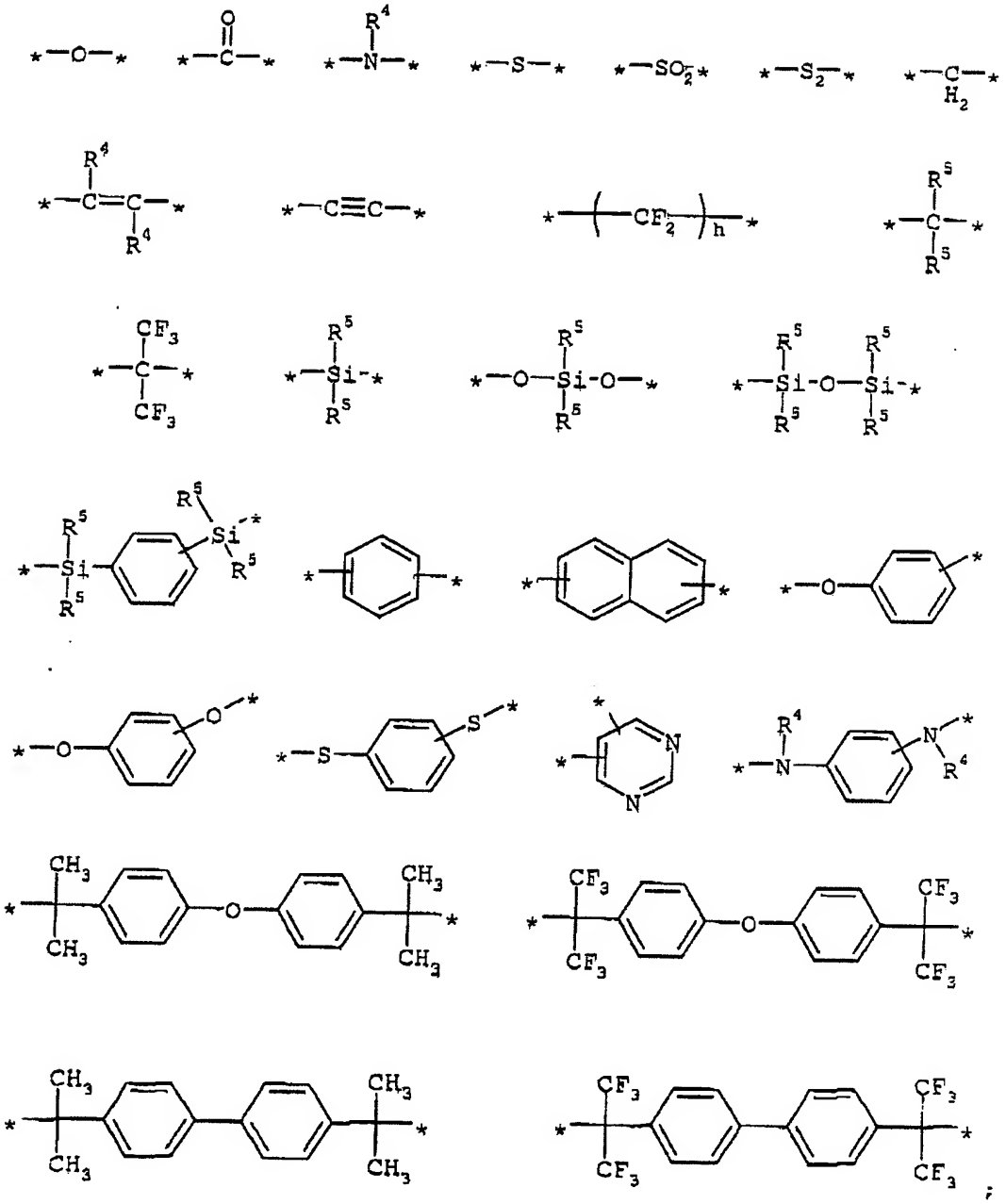
;

R^2 is a substituent selected from the group consisting of -H, -CF_3, -OH, -SH, -COOH, -$N(R^5)_2$, an alkyl group, an aryl group, a heteroaryl group and

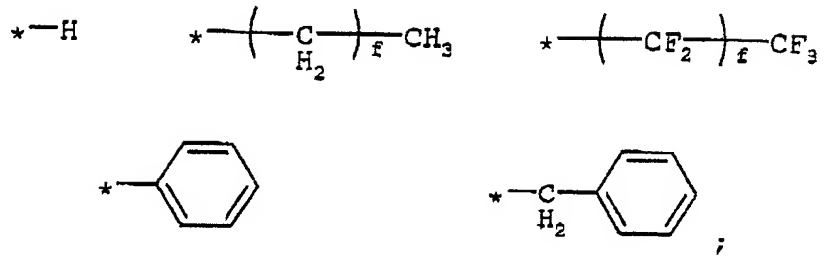


;

R^3 is a substituent selected from the group consisting of:



R^4 is a substituent selected from the group consisting of:



;

R^5 is a substituent selected from the group consisting of an alkyl, an aryl, and a heteroaryl radical;

a is an integer from 0 to 1;

b is an integer from 1 to 200;

c is an integer from 0 10 200;

d is an integer from 0 to 1;

e is an integer from 0 to 10;

f is an integer from 0 to 10;

g is an integer from 0 to 10;

h is an integer from 1 to 10;

n is an integer from 0 to 1; and

x is an integer from 0 to 10 if R^3 is $-CH_2-$

applying the solution to a substrate having a surface with trenches and contact holes formed therein;

disposing metallic structures on the surface; the trenches and contact holes being disposed between the metallic structures;

evaporating the solvent to fill the trenches and contact holes with the poly-o-hydroxyamide of the formula I; and

heating the substrate to cyclize the poly-o-hydroxyamide of the formula I to the polybenzoxazole according to claim 6.

14. The process according to claim 12, which further comprises adding a porogen to the solution of the poly-o-hydroxyamide of the formula I.

15. The process according to claim 13, which further comprises adding a porogen to the solution of the poly-o-hydroxyamide of the formula I.